| SEQ ID                            | SEQ ID                  | Mo | SEO ID NO:            | Nucleotide  | Nucleotide   | Amino acid convence (V. V.  |
|-----------------------------------|-------------------------|----|-----------------------|---|--|---|
| NO: of<br>nucleo-tide<br>sequence | NO: of peptide sequence |    | in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|                                   | <u> </u>                | -  | ļ                     | <u> </u>  | sequence   | *NDGI GW##DDWGI   |
| 3157                              | 8654                    | A  | 3417                  | 3   | 796  | *NPGLSW*TDFKCLI   |
|                                   |                         |    |                       |   | , ,,,,   | PGPRAPPIRCSPLRSAPRRPST*SAA<br>AWPASAAAGFCPCFYSAPSPSTSSR<br>WPAAAGCSLATTAKTSSRVVEMLP<br>RRAAAAGSYEGRAVRA/VMEYAW<br>GRAAA/DHALSVASSILVILFHPLLL<br>RPLCWTPECLSS*EVIGGLLALAAV   |
|                                   |                         |    |                       |   |  | FQIISLGNLPREVHPDLHPSCQAPLS<br>LTSITGAYGFGVGQPRIILTRLCLLL<br>LAASPTTEDGPSGAMPSPGTSTHLP<br>NLGMKCGRKSLPAEMGLPEGRKLF<br>LPGGLWNPIFWPVFHHY  |
| 3158                              | 8655                    | A  | 3418                  | 2   | 603  | GFFFFKIVLIQDLFPSTPLPSSVHSGD<br>YGDSGQDPSGTRNTFRRFCSPSFPPS<br>CQLPRPEAHTHANTRNPPPSPHLLSF<br>PHQSSEP*EGVKSLFEEA*KWGEMA<br>ITP*PTPLWR*LWRTPNSFPLSGQPF<br>STP\RPSVPSPIQPKTKHVQQHPPPAS<br>T*KTGSVPTSLTPSTGVLGEWPPEDP<br>AKGLMPEGKEEQKAFGP                              |
| 3159                              | 8656                    | В  | 3419                  | 34  | 375  | MLLGRLTSQLLRAVPWASLPRKGA<br>QLELEEMLVPRKMSVSPLESWLTA<br>RCFLPRLDTGTAGTVAPPQSYQCPP<br>SQIGEGAEQGDEGVADAPQIQCKN<br>VLKIRRKMNHHKYRKL*  |
| 3160                              | 8657                    | A  | 3420                  | 2   | 361  | YSTSPAGQVGRLSPSQGGPAGAGG<br>DAG/TPGRCPSAPWRAGSRPAASCP<br>DWIPG/PAGHVAPPQSYQCPPSQIGE<br>GPGGTPETQADQVRERPEAHLAEG<br>GAKGSPRRAGRPPRSTCGANESG  |
| 3161                              | 8658                    | A  | 3421                  | 1   | 417  | RITAATGGKGGARLICPAGR/CLGV<br>CQPSGASFSPAFSQMPSSPCSAPSPI<br>WLGGHW*DCGGAT/CPCGPGIQSG<br>QEAAGREP/GSPGG*RTSSWGPASPP<br>APAGPPCEGERPPYLGRPAMCCKG<br>ARRPGCPALQRRAKAGGR   |
| 3162                              | 8659                    | A  | 3422                  | 31  | 756  | GRRALRQAGPGSSREGPGARQRDS RGGEPGEGAGLPVLGPFGASERDTA RVGGLGASGRELCWKQSPPCGLGW RREKGSEGRGGTRRPSPGPPATTEG AAA*PE/PGTCVPAPLGP\GPPPTDH APGAPDFPAVEGRSLGRRPPALAQS /P/GSAGQPGLRSPFTAH/QPAGPGRR GLSPSQGGPAGAGGDAGPQEDVRQ PPGELGSRPARFLPQTGLPGPAGTC GLHRNPTQCPPSPDRGKGPKQGG |
| 3163                              | 8660                    | A  | 3423                  | 69  | 258  | PRTNRCATNHTPANF\*FFVETGFLH<br>VAQAGLELLGSSSSPALAPKQLVTG<br>ASHHTRPQ*NFLQ  |
| 3164                              | 8661                    | A  | 3424                  | 8   | 292  | QSFLFLKTRYLLRHP\GWNTVAQ*Q<br>LTVVTSRLN*SFHLSLPSS\WAIAVR<br>MPPCPANFLFF/TRDRVSLC*PRLVS<br>NTWVQMILLPQPPEMLGLQA   |
| 3165                              | 8662                    | A  | 3425                  | 123   | 357  | WGKRPGQGGRNPWGPPLPGGK/PP<br>KKGFLGPFPTGRFQGSSPGL*KGPFL<br>KGGP/QF*KPKPGSQNRVFKPPKIWE<br>TPLGN   |

| SEQ ID<br>NO: of<br>nuclco-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----------|-------------------------------------|---|--|---|
| 3166  | 8663                                    | A        | 3426                                | 2   | 311  | FHSCYPGWSAMVRSQLTATSASQF<br>K*FSCLS/LPSSWDYKCAPPHPANFL<br>FLVEMRFHHVLVRLVLNS*TQVIHL<br>PRPPKVLGITGVRLGAQPCTFFFFYC<br>SSV  |
| 3167  | 8664                                    | A        | 3427                                | 7   | 534  | TSDFIYKALKLQQEVPKAKSHLVQN YRFFFFFFLRWSLAPVAQTGVQWH DLSSLQPPPPGFKRFFCLSLPSSWDY RCPPPRPANF\*FLVETGFHHVDQAG LKHLTSDDPPASASPSAGITGVHPRP GQENQDLPGLCVDQLYTENSRFFSK NYYQTPNFTSRKRDLKISVFFFPA  |
| 3168  | 8665                                    | A        | 3428                                | 368   | 688  | LTVEFLNLLNILSLVCFIHQTN*IICY<br>FNT/SSSHQNAYI*EPHVPS*GQRGK<br>ASRQRG*TPPRSGTAASWPRVEK*R<br>EARPQNPAQQTTYVRESPTDASPSS<br>PKMAA  |
| 3169  | 8666                                    | A        | 3429                                | 1   | 90   | FFFVLSHQRNLCLRRYSRDMAAIIK<br>SKFFL\WPGRVAYAYNPSTLGGRGG<br>QIT*AQEFKCS*AAIIKSKFFL  |
| 3170  | 8667                                    | A        | 3430                                | 259   | 331  | RNE*LLTRFSPLSLSH*VLGVSMF  |
| 3171  | 8668                                    | A        | 3431                                | 1   | 639  | LGKFHTFQMSPGGGVGLLSL*SYRN SCLAG/GGCDHMSVHVCIRARGVK VRSKNSNHPTETRK\VLGGMRLSLT RESSISDSMWLARKQTLHTPVMMQ TPHLTPTI*EEPQRI\RPE\DTFMSV/Y YPMQTEHHQTPLDYNRRGTSLLED DEEPIVEDVMMSSEG\RIEDLNEGM DFDTMDIDLPPSKNR\RERTE\LKAD FFDP\ASIMDESVLG\VSMF   |
| 3172  | 8669                                    | A        | 3432                                | 1   | 354  | LETSPLMFTMLDRDMSG/TMGFNEF<br>KELWAVLNGWRQHLSSFDTDRSGT<br>VDPQELQKALTTMGFRLSPQAVNSI<br>AKRYSTNGKITFDDYIACCVKLRAL<br>TDSFRRRDTAQQ\FIQCVMSV  |
| 3173  | 8670                                    | A        | 3433                                | 1   | 788  | MAYPGHPGAGGGYYPGGPSVVKEE NLIRQNDVYVFPVSQYGGAPGGPA FPGQTQESL\YGYFAAVAGQDGQID ADELQRCLTQSG\IAG\GYKPFNL\ET CRLMVSML\DRDMSGTMGFSIEF\K ELLGLLLEWAGR\QHFISF\STDREW EQ*DPQELPEGP*QTMGF*V*VPPGC *ISFAKRYST\NGK\ITFDDYIACCVQ T*GVFTDSFSKTGILAQQGCLLNFPI WIDFHFNCVHGVFKSLGSCMNVIN DSNWSSPLLVLFAFG         |
| 3174  | 8671                                    | A        | 3434                                | 6222  | 7046   | RTVTTFLSKDSHGVYCAQGGKIPDH QNPQCNRKQHPVSTILMLDKASFC QLRKRKHNLSVNCINRNPFMSLKN TSWHSSLSVTQRHQQQSKLHFQGSI LLH*PSQNIL/SNI*KCINYC*HCSSV LLSYLFIETESYSVAQAGVQWHDLG LLQLLPLRFKQFSCFSLPSSWDYRS APSCPANFCILVEMGFCHVGQAGL KLLASSDPPALASQSAGITGVSHYT QPCSPFLKSTGLFSCKVLSNPYHKG RIYLGRMCFLNSTWHLVKSTLFCPL FI |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|--|
| 3175  | 8672                                    | A   | 3435                                | 3   | 287  | SRSVAQAGVRWRDLSSLQPPPPRFK<br>QFSCLNFPSSWDYRCAPPRPANF\*I<br>LAEMRFRHVGQVGLELLTSGDPPA<br>SASQSAGITDTSHCAWPFTF  |
| 3176  | 8673                                    | C   | 3436                                | 88  | 303  | MTFLESSAVPPHWTGQDGRVCWTG<br>WIPQCQAGSAPEVLECLSTQQVKSL<br>QTLGGAAVSHKTNICLPFTKLW*   |
| 3177  | 8674                                    | C   | 3437                                | 354   | 416  | MKESPGGELPQTGKKPVFLF*  |
| 3178  | 8675                                    | A   | 3438                                | 274   | 460  | TLKNLRSAASLTLGNPASPAHSSILS<br>CPMRGHCRTL*KCHDWSFRAKMPS<br>PFPQVGIYPPPN   |
| 3179  | 8676                                    | A   | 3439                                | 480   | 613  | LSFRAKMPSPFPQVGIYPPPN*GPIC<br>LLCFSFLCECVFYRNHLD   |
| 3180  | 8677                                    | A   | 3440                                | 1   | 864  | YPTTPYQHHPISSPPPIPTHNHHQKP<br>PTPSHRPQPTQRYTYHHNHTALTPI<br>APTRQSNPPHNTHHHTPS/TPRTNSS<br>PPH\HHTLPQRIPPYPPGT*HTPQAHS<br>HPAG*RASSQPRRAPSPASRPSPTDP<br>ALRANPLSRSYGSGLPTFPYLHCSN<br>MPKACSPWRPAADMCTAR\PRFRPF<br>KPDFQGPARAHRTPPETRRFPRHGPI<br>SRGEPI\PGQPCPSQRKENSTPEFPPA<br>SSGIGRVTDTGRLAAAPSPPLRIRGS<br>EPDSPFESAEGHRRPSPRPFRTALAQ<br>SLRNE |
| 3181  | 8678                                    | A   | 3441                                | 23  | 266  | EMESHSVT\RLECSGAISAHCTLRLP<br>GSSDSPASAS*EAGITGMCTT/ARLIF<br>GFHHVGQAGLKLL/NIVILLPRPPKV<br>LGLQA   |
| 3182  | 8679                                    | A   | 3442                                | 840   | 887  |  |
| 3183  | 8680                                    | A   | 3443                                | 127   | 593  | DKATKLTKFRSYAAVILKIHFVLTW VILFRRKIIRDETLKLLDLISLSVGKG QCYRVVFFWFFFFFEMKSHSV\TR LECSGAISAHCNLCLPGSSDSPASAS LVAGVTGM*HHTQPIFVFLVATGFH HVGQGWSRTPDIRVIRPPWPPKVLG LQA  |
| 3184  | 8681                                    | A   | 3444                                | 2   | 514  | FFFFLRQSL/DSVAHTGGQ/WGGS/<br>LQPPPPRFEGFLGLKLLGS*HYK/PP<br>RMANFIFSRDGVFAMLARLVLNSS<br>ASSDLPGLASHSAGITG\VSHHARPI<br>FSYKEHQSY\GLRACPAPV*PHLSYL<br>QPQPQYFQIRSHTEAPGST/WNFGE<br>DTIQPSTFSFYLT*KIIPILYRVKK  |
| 3185  | 8682                                    | A   | 3445                                | 2   | 147  | FFFCRD/RSLTMLPRLVLYSWAQVIL<br>PSWPPKMLG*QAQATVPSPPKSIN   |
| 3186  | 8683                                    | A   | 3446                                | 2   | 328  | TITYRGAKIRITSDSSSETMQAREE* SEIF*VLK/ESSSPH*PKILYSGKLSFK SKGEIK/YF*GKQN/LKEFVSSRPVL QGMLKVVLQREGKLYRSETQTYKK KEKASEKE   |
| 3187  | 8684                                    | A   | 3447                                | 1   | 357  | GDRVLLCCPG*SADHSSLQS*PSGL<br>KRYFCLGLLSNWKHRCMPPCPANF<br>FNFYFCRDK/SLPMLPRLVSNSW\AQ<br>GIFLSQPPVSVGDYRCGAYHALTLFI<br>YGRMGVFAMLAQAGPQTPGL  |
| 3188  | 8685                                    | A   | 3448                                | 2   | 84   | GLTLLPRLVSNSWPQEILLPW/PPKV   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |                | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide | Nucleotide<br>location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----------------|-------------------------------------|---|---|--|
| sequence                                    | sequence                                | -              |                                     | sequence  | peptide<br>sequence   |  |
|   |   | 1              |                                     |   |   | LKL*AQAGLKLLASGNPPALAPKVL  |
| 3189  | 8686                                    | <del>  _</del> | 2440                                | <del>                                     </del>        | 439   | KL   |
| 3190  | 8687                                    | $\frac{A}{A}$  | 3449<br>3450                        | 1   | 552   | GNEFSILKSPGSVVFRNGNWPIPGER   |
| 3150  | 3007                                    |                | 3430                                |   | 332   | IPDVAALSMGFSVKEDLSWPGL\AV GNLFHRPRGYPSWVM\VKGSGTKL ALTPQAVVISYP\LENRVYMVGKAN SVF\EDLSVTLRQLRNRLFQENSVLS SLPLNSLSRNNEVDLLFLSELQVLH  |
|   |   |                |                                     |   |   | DISSLLSRHKHLAKDHSPDLYSLEL<br>AGLDEIGKRY  |
| 3191  | 8688                                    | A              |                                     | 3   | 1111  | ILKSP\GSVVFRNG\NWPIPRE\RDPP DVAA\LSHGLPL*KKDLSWPGLAVG NLFHRPRAT\VMVNVNGVNKLDLP P\GSGIS\YPLENAVPFSLDSVANS\IH SLF\SEET\PVVLQLAPSEERVYM/VK GRANSVFEDLS\VTLRHSRNRLVFK KTLFLSFTPPQILLSRNNEVDLLFLS ELQV\LHDISSLPSRPKHL\ARDHSPD LYFTGSWAGL\DEIG\KALLGEDSEQ FRDASKILVD\ALQKFADDHVPVFM VGNPVVELVHCPSHLNTSPPLGKTR DLPLRPKQAQEPQQVPYNLA\YKYN FEYS\VVFNMVLWIMI\ALALA\VIIT SYNIWNMDP\GYDSIIYRMTNQKISE |
| 2.7.0.                                      | 2.500                                   |                |                                     |   |   | WIECYLWPRIRKRGFGNWLFC  |
| 3192  | 8689                                    | A              | 3452                                | 3   | 371   | MLPLARCSSSCLAPLSTYQTQVKTQ<br>VHTETCI*MFIAALFIIVRR*KQPKCP<br>SENK/WNKIWHIHTMK*YSATKKN<br>KVLTYATI*MNTENMLSQRSY*QKT<br>T*YLFLLMYMKIQNREMYRYKVD   |
| 3193  | 8690                                    | A              | 3453                                | 2   | 318   | ETESRSVAQAGVQ*RNLSSLQ/PLPP<br>GFK*FFSLSLRSSWDYRCMHDA*LI<br>FLFLVETGFCHASQAGLELLTSSDPP<br>ASASQSAKITSMSHHALPLFSNKVT<br>FWDSW  |
| 3194  | 8691                                    | A              | 3454                                | 33  | 504   | GLHNFLTYKATIISAVWYAVRVEN<br>RSTEQNRVQK*TYMYVVKDAR*VN<br>GNRILF*YC/WNN*IITWRKMNLNL<br>DLTLHRKVYLKWVIDLNVKAKTVS<br>PLGQNITESLHNFGVGKYFLDT*SI/<br>MPHKFFFNKLDIIRIKIFCS*KDAINK<br>MKKWPGVVAH   |
| 3195  | 8692                                    | A              | 3455                                | 16  | 1011  | WPVRAQAGQRPVLHTQVASLFAGV PCVLSHPKKGLLVPPFPPSKKGHLG KPHCPLPSAGRGAAGLGPLAQQPVS PAPASPMAPCKPKGLPPLPMGVEPE ILATMPVLTSHPP/SPEPMQSGNMPP S/PPSLCAFVPRWSHPPVPGWARWS CP/ALPAAPPSL*HWTRMQPPFCVPL RVPWVPSSGARGMKESGLDGQGFL GPTPSASPWGPWFDIRLPGCKQGIL AFKVTGPPTGFPDFEGKRFKKENKP PG*LESKAPDTVK*NPPSTNPPPAPA FLTWDCGAYRGPAGFLLVCQPSLLS LILKNIDDTLKCVERFEKLTASKQP                                       |
| 3196  | 8693                                    | A              | 3456                                | 1   | 348   | KATVVLARRS PQQLRCFSFWRKDTKVDWLLLNRG  |
| J 1 7 G                                     |   |                | J7JU                                |   | J-70  | 1 AAPVOLOL MICKOLLA AD AAPPPING  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  ARWLEKKTRLHRGPWARPRLMRA   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | QREEALRREGGNPPPRGPGGEEAPL<br>LRSSSGRPAR/HQT*QKSGASPSDPR<br>SASR*ALRREGGNPPPRGPGGEEAP<br>LLRSSSGRPARLRPSRSPERHPPTLA<br>PPPARPSCPALPRLSMSAG   |
| 3197  | 8694                                    | A | 3457                                | 2   | 247  | PGCTILAHCNLCLSGSSDSPASAS*V<br>TGNNRHAQPCPGLI*RTGFCHVG/R<br>MNMLVFNSLTSSDPLEVST*GPQPP<br>KVLGLQA   |
| 3198  | 8695                                    | A | 3458                                | 1   | 515  | GLGSLGPPAAVPTCPPRSPPP/GSPE<br>GALQCGTLPAGTATPDGHVGWAVP<br>FPPTVAPTRRSPRSPPQSC*WGLQH<br>QLCPGSMEEMHTPHGLALPGASHIV<br>PPTLCAPGGSEGARGI*PPA*AGYAL<br>SLPTQFQTLILHPSCCRPGVP/PINLA<br>AQLPPQVPHAPHAWQLPSAPK  |
| 3199  | 8696                                    | A | 3459                                | 2   | 223  | IYISPKALKFCREVGPICPPPK\KGSF<br>PKIPR*QIFPFPRC*KTGKGQGIKRPP<br>IRGKVLRCKPGLNLGPPRVL  |
| 3200  | 8697                                    | A | 3460                                | 2362  | 2696   |   |
| 3201  | 8698                                    | A | 3461                                | 1586  | 2325   | SPQRSGAARARPAPHRALLGRVPA RDAGSGRRTRSSRTRCGGCARRWS SISRRRRSSETSAGSWRRLSKPSGPG RWRHCARNTGRRCRPWWQISVVP RPSSRP/WLAALEAELKDSGEKPGK GASRPEDLQLIGRLQTRLKEREDIIK QLTKKKVEDVPSRVVSVPNLASYA KNFLSGDLSSRINAPPITTSPSLDPSP SCGRTYKPNQSTDAKTATRTPDGET AQAKEVQQKQGSPHQEWFTKYFSF |
| 3202  | 8699                                    | A | 3462                                | 125   | 489  | YYLFFFFFFLRQSLTLVAQAGGQW<br>RNLSSLQPLPPGFKRFPCLSLLSSWD<br>YKCPPP/RPG*FFVFLVETGFHHVAQ<br>AGLELLTLGDPPTSISQSAGITGVSH<br>QARPD*ETLEFQGDRVNLEE  |
| 3203  | 8700                                    | A | 3463                                | 1503  | 1511   | LFPVPFACPSLNCPSPPPIGVHLPIG*I<br>QRLETPP*EEGRWIPRRTCGPARPGP<br>PPGAPSVTLPPRTVHFGHPAKGIHFR<br>KP/RHPG*CVFILTLD\CVHLH*KIND<br>FIDTNFAMKSGYPNRIVRISFCLIHT   |
| 3204  | 8701                                    | A | 3464                                | 54  | 593  | RTALPAQHVASTWPGRPSRLLLRG<br>GPGAPRSMQTGDSVGRGASKEPN*\<br>PHSGLPKHPLARSPPQRPSHRAMGQ<br>GSPMPAGPT*TCAQALPPPSQDGLD<br>LGNRAGWGCSPECLSKAPGGEGPA<br>QAHPGPNPHTYRKPQWCWKLSPGH<br>ALAPSPPRREVALLNLYSFIVPRDSP<br>RPCIISL  |
| 3205  | 8702                                    | A | 3465                                | 2   | 324  | FFFFFLKWSLA/SFAQAGVQWCDLG<br>SLQALPPGFTPFSCLSLLSSWDYRRP<br>PPHLA/NFFVFLVDMGF\TVLARMV<br>SIS*PHDPPALASQSAGITGVSHACP<br>AYNVFKDDG   |
| 3206  | 8703                                    | A | 3466                                | 142   | 413  | AQEFKTSLGNMAKPCLYKKYKKM<br>SWDYRRPSPRPANFSC\FLVETGFCH<br>VAPAGLELLGSSNSPT*ASQSAGITG   |

| SEQ ID<br>NO: of<br>nucleo-tide | SEQ ID<br>NO: of<br>peptide |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon | Nucleotide<br>location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---------------------------------|-----------------------------|---|-------------------------------------|--|--|---|
| sequence                        | sequence                    |   | 057776,100                          | 1 .                                      |  | nucleotide insertion)   |
|                                 |                             |   |                                     |  |  | VSHHTRPQIFLLPLSN  |
| 3207                            | 8704                        | A | 3467                                | 241                                      | 523  | NISGSFCMPILTAPLFTVAKRWKQY<br>VPISG*MINKMWYIHTVEYYSASKR<br>KIR*/PCAATWMNLEDMMLSEVSQS<br>LEDKYSMLPFM*SIYVKYLEQSNA   |
| 3208                            | 8705                        | A | 3468                                | 137                                      | 382  | NSAVHQKFISIPNTSLPHSLAILKPQI<br>NSLEEET*PFWCKKSSPVPKMRGER<br>NDDNFHKVLLNVTNVDKPQGLRSP<br>KWFCWG  |
| 3209                            | 8706                        | A | 3469                                | 2  | 363  | FFFDTESYSVAQAGVQWHDLCSLQ<br>PPPAGFKQFFCLSLPSSQDYRHALP<br>WLANF\*FLVETGFHHVGQAGLKLL<br>TSSDLPASGSQSAGITGMSQRTLQQ<br>LSLKTTELRNFRCVPYCIINA  |
| 3210                            | 8707                        | A | 3470                                | 135                                      | 466  | GIDTILTLNQN*SLKTRQ*FTLIIF/IFF<br>FFLRWSL/DSVAQAGVQWRDLGSL<br>QAPPRGFTPFSCLSLPSSWDYRRPLP<br>RPANFFYF**RRGFTMLARMVSIS*P<br>RDLPAEFL   |
| 3211                            | 8708                        | В | 3471                                | 27                                       | 21189  | MKVSAARLAVILIATALCAPASASP YSSDTTPCCFAYIARPLPRAHIKEYF YTSGKCSNPAVVFVTRKNRQVCAN PEKKWVREYINSLEMSMICSGHHV YPNLPTDSFPGLDQFRGNYLHSRDY KNPEAFKGKRVLVIGLGNSGSDIAV ELSRLATQVHDVKVLGNKPKVIIST RSASWVMSRVWDDGYPWDMMYV TRFASFLRNVLPSFISDWLYVQKMN TWFKHENYGLMPLNGSLRKEPVFN DELPSRILCGTLSIKPSVKEFTETSAV FEDGTMFEAIDSVIFATGYDYSYPFL DETIMKSRNNEVTLFKGIFPPLMEK PTLAVIGLVQSLGAAIPTADLQAW WAAKVFANSCTLPTTNEMMDDTD EKMGKKLKCPYQFRLMGPGKWDG ARNAILTQWNRTVKPTRTRVVSEV QRPHPFYNLLKMLSFPLLLLAVTLT FY* |
| 3212                            | 8709                        | A | 3472                                | 9  | 339  | ITLSLLSFFNLRPSFALLAQAGVHW RDLDSLQPPPLRFK*FSYLKSP\RSW DYGHAPPRPANSVLLVETGSLHVSQ GGLILPTSGDPPASASQSAGITGVTN CARPPSLFS   |
| 3213                            | 8710                        | A | 3473                                | 1  | 50   |   |
| 3214                            | 8711                        | A | 3474                                |  | 1256   | MAAAAAQGGGGGEPRRTEGVGPG VPGEVEMVKGQPFDVGPRYTQLQY IGEGAYGMVSSAYDHVRKTRVAIK KISPFEHQTYCQRTLRENQILLRFRH ENVIGIRDI\LRASTLEAMRDVYVVQ DLMETDLCKLREKPSKLSNDHILLT FLLPDSLAGPSSYIH\SAN\VLHLRS* SPPTWLIQHHLADLKVCGFG\LAGIC RSWRHDHTGFLTE\YVATRWYRAP EIMLNSKGYTKSIDIWSVG\CILG\E MLSTRAIFP\GKHYLDQLNHILGILG\ SPSQEDLNCIINMKARNYLQSLPSK TKVAWAKLFPKSDFKAL\DLLDRM L\TFNPNKRITVEEALAHP\YLEQYY  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   | sequence   | DPTDEPVGEGSPSPFGMEL\DDLPKE<br>RLKELIF\QET\ARFQPGSAGRPPSPR<br>QTSLHPGGWTCPPARPLSRRDC  |
| 3215  | 8712                                    | A | 3475                                | 877   | 1463   | LPFTAWP*E/QLQQAVHAGLPQQAK ILFDGGSEIGKILPAFQSGNLSCQLH **IGQRAGRGGLRIGRQGGFSFHQ* DGQQLIALH/QPGPERVAASGPRWF APAGENPV*WWFRNRQNPLIALRSL PAFQSGNLSCQLH**IGQRAGRGGL RIGRQGGFSFHQ*DGQQLIALHRLA LRELQQAVHAGLPQQAKILFDGGSE IGKIPV*GLLRWPPLPRDVQWDSAP LLRARWGL*GER*PREVPAALQGE* PQALLPGGGEPGWQPAEPHPAGGV HRAGPPGGGCWARAGGHQQKHLL RPAAGVPPDRGCLLQLGQIPH*AGE QVQAGPGTGQPAGEQAQRGLSGNA GPHQVPAEGDTGHLCGD |
| 3216  | 8713                                    | A | 3476                                | 29  | 1076   | EQRDPQDIFSQRKSSAFPPSPEIEILS GGKSLSLQLHTPSPG/QQGETPRGG QQSQH/PCQGPGGGVPRYACAGGV PVTERGAQGWVHPALRRARYPDA GVQSHMKPAGDWGPGSNKPAGTD ADAVSGRR*LPKTLPSLGLGKKSPP GVPGHPEYPE/HGGSEALLHEFLLPP VSRLL\HGPLYPQMSNGTLHHYFVP DGDYEENDDPEKCQL/PLQGE*PQA LLPGGGEPGWKPAEPHPAGGSSPC WAARWEDAGRVLGGHQQKHLLRP RRGRELWQVPAAGVPPDRGCLLQL GQIPH*AGEQVQAGPGTGQPAGEQ AQRGLSGNAGPHQGPAEGDTGHLC GAQGLIRAAGPHH          |
| 3217  | 8714                                    | A | 3477                                | 3   | 591  | ERNYLFFLRWSLTLSSRLRGQWRN LG*\MQPPPP\GFKA\FSCLSLPSSWD YRRMPPCPANFCILVEIGFHCLAKL VLNSRPHDPPTSASQSAGITGVSHR AQT*KGIHLNELCTALAKEGRAWS GR*RAGAATPAP/PAPFTL*PGCIPES WPSPMPPPHLPLTALCKATHAGTK HPHLTKTVSSCGAVLQPTPQRKD   |
| 3218  | 8715                                    | A | 3478                                | 1   | 235  | RDHPGQH/GETPSLRKIEILAGHGVR<br>HL*SQLLGRLRQENCLNSGGRGCSE<br>PRSCHPTLAWAIEQGSVSRKEGHFP<br>RLA  |
| 3219  | 8716                                    | A | 3479                                | 2   | 928  | RPPRPGTERALPSRLRSRPRVRTETP SPSSSGPPPSRSNTGMAPLRR*RV*R GTVPRSG*KGR*PCSRRRRSVPSGR TPALRGTRAPSDQGKGKARPPEP\P APSRPCPGSRFCRASRSRTSPRPPTP ARESGNPGRSP\DGGEKAAAQGS*K ESAACSNRAWS*WAA\SPPWITVTR QKRRGTLDQPPNQEDKPGARTLKS EPGKQAKVPERGQEPVKQADFVRS KSFLITPVKPAVDRKQGAKLNFKEG LQRGISLSHQNLAAQSALMMEKEL HQLKRASYASTDQPSWMELARKKS QAWSDMPQIIK   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|--|
| 3220  | 8717                                    | A   | 3480                                | 1   | 435  | EKINKIRWLPQQNAAHFLLGTNDK<br>AIKLWKISERDKKAEGYNLKDEDG<br>RLRDPFRITALRVPILKPMDLMVEA<br>SPRRIFANAHTYHINSISVNSDHETP\<br>NIVDIKPANMEELTEVITAAEFHPH<br>QCNVFVYSSSKGTIRLCDMR  |
| 3221  | 8718                                    | A   | 3481                                | 204   | 397  | VPILKPMGSYG*EASPR\RIFANAHT YHI\NSI\SVNSDH\ETYLSADDLRINL WHLEITDRSFNIV  |
| 3222  | 8719                                    | A   | 3482                                |   | 1462   | PLRSWLPRLPDSQADIISTVEFNYSG DLLAT/GDKGGRVVIFQREQEVLAQ PRRPALP*SVSSFLSTSCREVWQGCE FSLPFRERIK/GRPHSRGEYNVYS/TA FQSHGTGGFDYLKSLEIEEKINKIRW LPQQNAAHFLLSTNDKTIKLWKISE RDKRAEGYNLKDEDGRLRDPFRIT ALRVPILKPMDLMVEASPRRIFANA HTYHINSISVNSDH\ETYLSAR*PGGI NLW\HLGNHR*EAFNIVDI\KPANME ELTEVITAAEFHPHQCNV\F\VYSSS KGTIRLCDMR\SSALCDRHS/KSFFE EPEDPK/SSRSFFS\EIISSIS\DVKF\SH SG\RYM\MTRGLPVRWKVWGPSTW EEAGPVGGPTRVHEYL\RTKL\CSL\ YENDCIF\DKF\ECCWNG\SDSAIMT GSYNNFFRMFDRDTRRDVTL\EASR ESSKPRASLKPRKVCTGGKRRKDEI SVDSLDFN\KKILHTAWHPVGQCYL PWLATN\NLYIFQDKIN |
| 3223  | 8720                                    | A   | 3483                                | 603   | 659  | MCGFFFVFFFWRRSL/DSVTQAGVQ<br>WRDLGSLQPLPPGFKRFSCLSLPSS<br>WDYRRPPPCLANFLFLVEMGF/TTV<br>LARLVSNS*PRDLPTSASPSAGITGV<br>S*HASSRL  |
| 3224  | 8721                                    | A   | 3484                                | 84  | 202  |  |
| 3225  | 8722                                    | A   |                                     | 3   | 577  | ILGFPFFVRWGSHTVAQAGVQWCD HGSLQPRSPGVK*SSHLSLLGSWNH RHATTTPG*FCFFSRIRSHCVAQAGL *LLTSNHPPALASQT\VGITGVSHWT WPNTGFSVLTATNKNLKFFHYAISK CLVRAKLSSRLLKIEERNKALSAPV VSVSIFDRVLRLLGYSASDWQPEFV ETAVSNFVIYGIFRGQ  |
| 3226  | 8723                                    | A   |                                     | 3   | 248  | SLYIEIPGGALPEGSKDSFAVLLEFA<br>EEQLRADHVFICFHKN\FSFLGFEIV<br>RPGHPLVPKRPDACFMAYTFERESS<br>GEEEE   |
| 3227  | 8724                                    | С   | 3487                                | 185   | 340  | MDNFCSSLCDFCHQNKNLRLVXXX<br>XXXGGRFKGPLEGPKFTRACNELV<br>FSL*   |
| 3228  | 8725                                    | A   | 3488                                | 1   | 546  | NDRLN*TRELTSHERRRFPRPSSRLT DAQ\RINWRQVLSAGS\LYI\EIPGRR AAEGGARNSFAVLLEFAEG\QLRAD HVL\ICFHKNREGQKPPLL\RTFSFFG LEDFEDRGNPLVPKETPDACFHGLT TFERE\SSG\EEEEVGARLRGLGQFP RPGAHPLVKPGWGKEPVDSPHLAL GLSPML  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----------|-------------------------------------|---|--|---|
| 3229  | 8726                                    | A        | 3489                                | 1   | 526  | FFFLERDPCSVTQAGMQWHDLGSL<br>QPPPPGFKWFSCLSFPSSWDYRCPPP<br>HPANFCIFSRD/MGFTILARLVSNS*P<br>HDPPTSASQSAGTTGVSHSAWPVC/<br>LFEIEFHS\VAQAGVQWRDLGSLQP<br>LPPEFK*FSCLSLPSSRDHRHLPSLPA<br>KFHIFSRDRVSPCWPGWS*TPDLR  |
| 3230  | 8727                                    | A        | 3490                                | 276   | 735  | FFFFFLRQSFSLVSQAGVQWHNLG<br>SLQPPPPGFRQFSCLSLPSSWDYRHP<br>PPCPANFCIFNRELIIVYLIKTGF/IHV<br>GQAGLELLTSGDPPALASQSAGIPG<br>MSHCAQSTH*FLLAQQLFCSIYPSFH<br>AQGVIPRIVTHKRETGSQTLYSIV   |
| 3231  | 8728                                    | A        | 3491                                | 2   | 344  | FIFIF/NFLRWSL/DSVAQAGAQWRD<br>LGSLQGPPPGFTPVSCLSLPSSWDY<br>RCLPPRPANFF\AFLVETGFTVLARM<br>VSIS*PRDPPASAYQSAGITGVTTAP<br>GLLF*INICLAAFYFV   |
| 3232  | 8729                                    | A        | 3492                                | 109   | 559  | QFLHRLVHDSGEVWMKLVE**NTL<br>LAKMVSISWPRDLPASASQSAGITG<br>LIGALVLSVGIYAEVER/HEI*NP*KC<br>LPGSSHHPHPPGRRHVHGLLHWCA<br>GVPP*QPGKH  |
| 3233  | 8730                                    | A        | 3493                                | 1   | 593  | ETESRSIVQAGVQGRELGSLQTLPP<br>GFTPFSCPSL\SWDYRHPPQHSANFL<br>AFLVETGF\TVLARIVSIS*PHDPPAS<br>ASQSAGITGVSHHARPQTGRFLLFL<br>FFFFETESCSVTQIGVCSGHDLGSL\<br>QLRPPGITPFSCLSLPSSWDYRRPRL<br>RPANFFFFVFFSRDGVSLC*PGWSRS<br>PDLVICPPRPPKVLGLQA                         |
| 3234  | 8731                                    | A        | 3494                                | 3   | 484  | RFFFFLRRSFT/SVAQAGV*WHDL<br>GSLQPPPPWFR*YLCLGPLNSWDYR<br>RGPPRLVNLCIF/M*R*SFTVLARLV<br>SNSWPQ/CDLPP/SASQGAGNTGVS<br>HCARPDEIFYYQC*Y*ETEMVRRST<br>TQDRAGSTTVLKLLGQLRPEREIVN<br>LALGALVYRNITPN  |
| 3235  | 8732                                    | A        | 3495                                | 104   | 288  | GEVICGRRRSEVSRCNLVDLEPKGP<br>WGHWQGG*GDRRAGGTP*GE/GHL<br>RKKAI*GLQVQPGRPRTEGPLGA/PG<br>KGDP*TPTEGPRGDARNCDACPRPR<br>ARPVLVW   |
| 3236  | 8733                                    | A        | 3496                                | 3   | 641  | RPPFFFFFFFFFFFRRSL/NSVTQAR<br>LQWHY\LGSLQAPPPGFTLFSCLSLP<br>SSWDHRRPP/RMPG*LFFAFLVETGF<br>QRVSQGWVSIS*PQ/CDPPASGLSKC<br>WGLQGVSHLRPSHLSFLAFSFFSFET<br>GS\FSVAQAGLQWA\NHSSLQAPSP<br>GFTPFSCHSLPSSWDCRHPPPRPANF<br>/CCIFSRDGVSPC*SGWSRSPVLVIRP<br>PRPPTVLGSQG |
| 3237  | 8734                                    | A        | 3497                                | 1   | 296  | VSRRFKQSIPP*AS*GWDHRCVPP\S<br>LANFFFLLEMG\FPMLPRLVLNSWA<br>QVILPSQPSQSAVITGMSHCACLYW<br>LLKTKQIKIKQTGMSKVIKLFPL   |
| 3238  | 8735                                    | A        | 3498                                | 1   | 347  | KKTGRRKRNMIDYEKKKNKEQEER  |

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|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | RKKRKKRKSSSSSSSPEEKKEEKK\K<br>KREEEEENRKKEEEEE*DK/KEEED<br>RRKHESRRRLRAVGDEVINKVCQE<br>LKRTIPVGRDYRPLDPSS  |
| 3239  | 8736                                    | A | 3499                                | 2   | 286  | PQPCSLAPNPPRMPPGSF/TPCPSPPR<br>SNITL*KQRPPSPPPSPEPPR\AQQRV<br>AQNLTSPRPAAAKPPGWLSTNLSK<br>ALPETPTVAQSPVLFTHF   |
| 3240  | 8737                                    | A | 3500                                | 3   | 954  | RPRAGAAGGGGGGSRPSGAHPSRS AC/GCPAGTRPGRAPPAASARPSRS KRGGEERVLEKEEEEDDR*R*R*RR SMCQRRSEVAPSSDRPGRCPAPPSL TASGDLRVPRRGSRSGPP\GTAPGPG *RAGASPGQRHPPGCSPWQP*TRKG EQVFFSFPASVATGPDSPSPVPLPPG KPALPGADGTPFGCPPGRKEKPFDP RSSWNVMGFRSNILLEA*FPEQATA FPRAGN*WQIFAAHAAHRCASPACP S\PRASPENLRAPHQGASARPL*GM MDPDGFL/ALSAQPHPCPKPIPAPISP KIPQSPGSWTGDTLSPH |
| 3241  | 8738                                    | C | 3501                                | 68  | 199  | MPIIPALWEAQAGGLLRPGVCDQPG<br>QYSKTSSLINKLKNPPSL*   |
| 3242  | 8739                                    | A | 3502                                | 11  | 520  | IRVDDFVAAHSRCCVAFPSSFTPRSR<br>RRPKRRRRRRENDPAASSLPPAHLP<br>CSVSQSAAGARLVLRPRACGAQAQ<br>RP*LASGLRTSALRRRGHPRAELRS<br>GPQRRQASE/PSPRGVAGARWWRR<br>EDG/RPSKRSRMAQREAQQRTSPQR<br>GNGRPKTSEKCPPEEKAVCRTPG   |
| 3243  | 8740                                    | A | 3504                                | 78  | 595  | NQNRLKEAGWRLKLADETSSSSHQ<br>QVCGTHHVSAKCYS\GSPYS*KHPD<br>SPSPATSRKQNLSTQSCISPMWPCSQ<br>RSICQFGHGGTESGQGILLGLLRKAI<br>GSPGKRSAPVQPNWEGGNG*EAAW<br>ASSSSPSCKVTAPLAPSELFPSKFLL<br>RNKKAQRKISHLLEVTVGHLLC  |
| 3244  | 8741                                    | A | 3505                                | 2   | 267  | ADLSAEAL*TRREWDDIFKVLKTSS/<br>LGQPKILYPSKLSLINEASSSSSSSS<br>SS/REFTTRLVL*EMLKGILHMEAQG<br>QYLPS*KHTKV  |
| 3245  | 8742                                    | A | 3506                                | 1   | 323  | IAGEVNTPRSVTDRSS*Q/IIQEGIVQ<br>LNSAIH/QTGCTNINRILPLTTAEYTF<br>FSHLYRTFT/KIAHILGHMTHLNKG<br>KRIEIIQSMLSDHNGIQPEISNRKIAG<br>KSPNT  |
| 3246  | 8743                                    | A | 3507                                | 3   | 814  | SSGLAGTPPFPSEGAVCRSQPG*GSG<br>\SPPLPVGPACWYLPCGP*DQRCPPG<br>SLGPSAEPGS*NLSCPGRPMCSPAGT<br>SCPAPV/PDSVTPVLRARGTACLPSP<br>TFPAWSVPRFQPGAAPSSADLVHFH<br>AASGPSASLSSSLSTKAPSLPLGACL<br>PAGGVT*LFGPPSG/RLWRPP*GLTG<br>GGLVWAAGVHWACLWPGQASGG<br>SIRHVCVAVGVQGAPAQKEGGAGL<br>GKGLGSFACGRPHLPPAYFACGRPH<br>LPPAYFVLDLPFAKVLRNINI                    |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
| 3247  | 8744                                    | С | 3508                                | 112   | 252  | MFRSMYNXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 3248  | 8745                                    | A | 3509                                | 448   | 715  | FFIISIKIIEFFFFETESCSSVTQTRVQ<br>WFDLGS\LQPPPPGFKQFSCLSLSIS<br>WHYTHVPPHLANYRIFSRDGV*PC<br>WPGWSQTHDLE   |
| 3249  | 8746                                    | A | 3510                                | 55  | 295  | SQYAYTKEMESIVNNLPKKKTPGL<br>HSFTGEFYQTFKNEMIL/YIL*FLPEI*<br>SRG/IYPSSSSSSSSLS*LPKLDKDIIRK<br>EN   |
| 3250  | 8747                                    | A | 3511                                | 2   | 853  | DLMCKKMKHLWLFLLLVAAPRCV LSQLSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS  |
| 3251  | 8748                                    | A | 3512                                | 3   | 2310   | QLLTMDWTWNILFLVAAATGAHSQ VQLVQSGAEVKKPGASVKVSCKAS GYTFTNNGLAWVRQAPGQGLEWM GWTIASNGKTNYAQKFQGRVTMTT DTSTNTAYMELRSLRSDDTAVYYC AREKDNYATGAWFAYWGQGTLVT VSSGES*AWYPGIQICSMLEL*ISAF WGRPGLTLAGGREGAKVTQVAPA RCTPNAHEPRHWTLHGPSRIDKNR GASAPWAQLCPTPRSHGTTSLAAST KGPSVFPLAPCSRSTSESTAALGCLV KDYFPEPVTVSWNSGALTSGVHTFP AVLQSSGLYSLSSVVTVPSSSLGTK TYTCNVDHKPSNTKVDKR/VW*EA STGREGVCWKPGSALLPGRTPAVQ PQPRAARHAPSVSSPGGL*PPHSCSG RGSSGFFHQAPGRHRLDAPTPGPAH KGAGAGLRPAKSHIREDPAPDLSPP QRPNSPLPQLGHLLSSQIPVTPNLLS AEPKSCDKTHTCPPCPGKPAQASPS SSRRDRCPRVACIQGQAPAGC*HVH LHLFL\APELLGGPSVFLFPPKPKDT LMISRTPEVTCVVVDVSHEDPEVKF NWYVDGVEVHNAKTKPREEQYNS TYRVVSVLTVLHQDWLNGKEYKC KVSNKALPAPIEKTISKAKGGTRGV RGPHGQRPARPTLCPESDRCTNLCP YR\QPREPQVYTLPPSQEEMTKNQV SLTCLVKGFYPSDIAVEWESNGQPE NNYKTTPPVLDSDGSFFLYSRLTVD KSRWQEGNVFSCSVMHEALHNHY TQKSLSLSLSLGK |
| 3252  | 8749                                    | A | 3513                                | 1   | 1677   | AEVQLVESGGGLVQPGGSLRLSCA<br>ASGFSFSKAYMNWVRQAPGKGLE<br>WVGRIKTKKDAGTTDYAAPVKGRF   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|------------------------------------|--|
|   |   |   |                                     |   |                                    | TISRDNSKNTLYLQLNSLRAEDTAV YYCAKDEFSSTRKNFLTGQSKTFAA YYGMDVWGQGTLVTVSSASTKGPS VFPLAPSSKSTSGGTAALGCLVKDY FPEPVTVSWNSGALTSGVHTFPAVL QYSGLYSLSSVVTVPSSSLGTQ\TYT CNVNHKPSNTKVDKTVELKTPLGD TTHTCPPCPTP*L\LGGPSVFLFPPKP KDTLMISRTPR\VTCVVVDVDPRKT PEGQVPTWYV\DGL\EVHKCQDKSR GKEQYNSY\YRVV\SVLTVV\HQDW \LNGK\EYK\CRVSHKSPPQAPIEETH LPKPKGSPQNPQVYTLPPSRDELTK N\QVSLTCLVKGFYP\SDIAVELESN\ GQPGNNFK\TTPPVLDSDGSFFLYSK LTVD\KSRWQQG\NVF\SCSVMHE\A LHNPYTQKSLSLSPGKMIPTADKPP LPGSLAGRTKDAWHGTPVYILPRAP KHGNKAPTPWPWAKKKKKKKKKK   |
| 3253  | 8750                                    | A | 3514                                | 1   | 164                                | TRVNENQIESKAAYALFYKRQDVA<br>RRLLSPAGS/SGAPASPACSSPPSSEF<br>MDVN  |
| 3254  | 8751                                    | A | 3515                                | 1   | 712                                | EILIIHLKRFSYTKFSREKLDTLVEFP IRSGARERMAGGRQGKEGVYQY*P SPHPQ\DLDFSEFVIQPQNESNPELY KYDLIAVSNHYGGMRDGHCMCQA VGGACPGGSGQGGDQDLPSE*LGM *ASGEGSSVVGRK*TRSEIWTLSEEA RKGRRG*LSFPFR\TTFACNKDSGQ WHYFDDNSVSPVNENQIESKAAYV LFYQRQDVARRLLSPAGSSGAPASP ACSSPPSSEFMDVN  |
| 3255  | 8752                                    | A | 3516                                | 3   | 3090                               | IPLLQLLLRRLWRRHGRWTEDREPQ HEELPGLDSQWRQIENGESGRERPL RAGESWFLVEKHWYKQWEAYVQG GDQDSSTFPGCINNATLFQDEINWR LKEGLVEGEDYVLLPARAWHYLVS WYGLEHGQPPIERKVIELPNIQKVE VYPVELLLVRHNDLGKSHTVQFSH TDSIGLVLRTARERFLVEPQEDTRL WAKNSEGSLDRLYDTHITVLDAAL ETGQLIIMETRKKDGTWPSAQLHV MNNNMSEEDEDFKGQPGICGLTNL GNTCFMNSALQCLSNVPQLTEYFL NNCYLEELNFRNPLGMKGEIAEAY ADLVKQAWSGHHRSIVPHVFKNKV GHFASQFLGYQQHDSQELLSFLLDG LHEDLNRVKKKEYVELCDAAGRPD QEVAQEAWQNHKRRNDSVIVDTFH GLFKSTLVCPDCGNVSVTFDPFCYL SVPLPISHKRVLEVFFIPMDPRRKPE QHRLVVPKKGKISDLCVALSKHTGI SPERMMVADVFSHRFYKLYQLEEP LSSILDRDDIFVYEVSGRIEAIEGSRE DIVVPVYLRERTPARDYNNSYYGL MLFGHPLLVSVPRDRFTWEGLYNV LMYRLSRYVTKPNSDDEDDGDEKE |

|        |              |   |      |      | peptide<br>sequence |   |
|--------|--------------|---|------|------|---------------------|---|
|        |              |   |      |      |                     | DDEEDKDDVPGPSTGGSLRDPEPEQ AGPSSGVTNRCPFLLDNCLGTSQWP PRRRKQLVQLQ\TVNSNGHNRLH HSPCTKSNAKPVHCYSTWKP\EMK K\RYYDE*EGEGLREGNAFRRGYV* RKAPVRLQECIELFTTVEPPPFGGK\ EREKPW\YCP\SCKQHQLAT\KKL\D LWM\LPEILIIHLKTFFPYTQVLPEKK LEHPSWKFPYPGTLDFS*/EFVIQAH QNEVEIRELYK\YDLI\AVS\NH\YGG MRDGTLTQHLACNKDSGQWHLLLI DNSVFPLFN*GIQIRVPRAAYVL\FY QRQ/DTLARRLLSPCRAHLAPSVLP CLHAPSPQLVSSCDVILRALGPAPE KKKKKALSAISLLVSAPLLLFVLGA PARHCRLSRGYCSPVPLNRSLPGKN RSCLLLAVRAPPCVCPSSSDPPF |
| 3256   | 8753         | A | 3518 | 1    | 271                 | PLPPGFK*FSYLRLPSSWDYRCPPPH<br>PTNF\*FLVAMWFCHVGQAGFELLT<br>SGDPPTSASQSAGITGVSHRSRPIVD<br>FLNYLLRKSYPFT  |
| 3257 8 | 8754         | A | 3519 | 3    | 633                 | FFFI*DRVSLIAQAGVQWRNCGSLQ PPPTGFKQFSCLSLWRSWHYRCRH HAQLIFVFLVKTGF\TMSVKADLEL LTSGDPTASASQSAG\ITGVNHQCPA SKQF*FHCKSW/CLF*MQSLSFFFLG GGQSRSVGQAGVQWHDLDSLQPLS PGLKQFSSLSLPSSWDYRGVPLRLA NFCIFSRDGVSLCWPGWS*TPDLKA NPTRLGLPKGWGL   |
| 3258   | 8755         | A | 3520 | 2    | 430                 | CLKNMVGAGEVDEDLEVETKEECE<br>KYGKVGKCVIFEIPGAPDDEAVRIF<br>LEFERVESAIKG*WYS*ILKNKKVEF<br>TALIFTSKAYCLIKVKPLSYRIPALF<br>CLLFAFQRLLTLNGRYFGGR\VVKA<br>CFYNLDKFRVLDLAEQV   |
| 3259   | 8756         | A | 3521 | 3    | 1076                | HEERQRQRELERQKEIEEREK\RRK DRHEASGFARRPDPDSDEDEDYER\ ERRKRSMGGAAIAPPTSLVEKDKEL PRDFPYEEDSRPRSQSSK\AAIPPPVY \EEQDRP\RSPT\GP\SNSFLANMGGT VAHKIMQK\YGLPGGPRVLGKHEQ GLSTALSVEKT\NKRGGKIIVGDATE KDASKKSDSNP\LTEILKCPTKVVLL RNMVGAGEVDED\LEVET\REECEK\ YG\KVGKCVI\FEIPGCPLMMEASTG YFLEI*EELNSAIKAVVAL\NGRYFW CTGW*KAMFLQIWAKFRVLDLARN QVWIFKEPRARVISGDPLNELQAVE KKEKGPQPPWLFAYPRLLEGLLRY MLIDPFFYFVVF  |
|        | 3757<br>3758 | A | 3522 | 1381 | 1787                | LEYVAHPLHQLLILNNFYSVLNEKY LVFFFLNMYMTFKCNLLFFLRPSL/D SVTQAGVQW/RDLGSLQAL/PLPGF APFSCLSLPISLAYSHLPPHLANFLY F**RQGFTVLARMVSIS*PRDPPTSA SQSAGITGMSH LEYVAHPLHQLLILNNFYSVLNEKY  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|--|
|   |   |     |                                     |   |  | LVFFFLNMYMTFKCNLLFFLRPSL/D<br>SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH   |
| 3262  | 8759                                    | A   | 3524                                | 1456  | 1862   | LEYVAHPLHQLLILNNFYSVLNEKY<br>LVFFFLNMYMTFKCNLLFFLRPSL/D<br>SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH  |
| 3263  | 8760                                    | A   | 3525                                | 889   | 1295   | LEYVAHPLHQLLILNNFYSVLNEKY<br>LVFFFLNMYMTFKCNLLFFLRPSL/D<br>SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH  |
| 3264  | 8761                                    | A   | 3526                                | 743   | 1149   | LEYVAHPLHQLLILNNFYSVLNEKY<br>LVFFFLNMYMTFKCNLLFFLRPSL/D<br>SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH  |
| 3265  | 8762                                    | A   | 3527                                | 2583  | 3580   | DRVSLLLPRLECNGAILAHCNLCLS GSSDSPASASQVTGITGKCHHTQLIF VFLVEMGFHHIAQAGLELLTS\DSPT LASQSAGITGVNHHAWLFFFCS/RD TVSLCYPGWSRVA*SRITATSA\PGL K*FACFSLPSSRDYRHVPPHPGNFCI FGRDEVSPCWPGWF*TPDLR\YPPA SASQSAEIIGVSHHTWPQEVFLFLNL FIYLRWSL/DSVAQARVQRRDLGSL QAPPPRFKPFSCLSLPSSWDYRRPPP HPANFFVFLVETGF\TVLARRVLIS* PRDLPASASQSAGITGVSHHTR/LIF/ NFFETGTHSVTWAAVQWYTI/GSLQ PRTPELK*SSHLILTSNWDYRCTPPC PPNLFIYLFIYFHRDEGSLCCPGWS* TPELK |
| 3266  | 8763                                    | A   | 3528                                | 1966  | 2372   | LEYVAHPLHQLLILNNFYSVLNEKY<br>LVFFFLNMYMTFKCNLLFFLRPSL/D<br>SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH  |
| 3267  | 8764                                    | A   |                                     | 10304   | 11097  | FAFSPK*HSCLRCPCI*FSSGLLHEVL *LLPLCWP*THGWDPGSREANKSPK LHAIRCVWVLEEENLWLSSNSQSLQ TVKN*ESHIN*SCRSNLI/HH*FWNQ VK*K*LLNISGNCFFFLRWSL/DSVA QAGVYWRDLGSLQPPPPGFKRFSCL SLPSSWDYWHLPPCLAKFCIFSRDG/ GFTIWARLVLNS*SCDLPASGSQSA GITGVSHHTWLQVTYFLKEMRSCY FSQVGWPQTPGLKQCSHLKLLSSW DYRHMSPHLAISGS  |
| 3268  | 8765                                    | A   | 3530                                | .87   | 411  | ARLVQNTVAQLKEVQYKLFFGFLF<br>FE*/QSHSVAQAGYSAVIIAHCNLSL   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|--|
|   |   |     |                                     |   |  | LGSSDPFFSAS*VAGTTGMCQHAW<br>LIFDR*WR*GLAMLPRLEM*IFLISH<br>LRLIWSAWS  |
| 3269  | 8766                                    | A   | 3531                                | 31  | 403  | THLNGLQIRGSPLFFF/FELESSVA\ RLQCSGVISSHCNLRLPGSSNSPASA S*IAGITGAHHNPG*FF\VFFSRGRFH HVGQAGLELLTSSDPPRPSTLPQSG WGFTRHGAIAPQWGQVPFHRS  |
| 3270  | 8767                                    | A   | 3532                                | 7   | 1047   |  |
| 3271  | 8768                                    | A   | 3533                                | 3   | 53   |  |
| 3272  | 8769                                    | A   | 3534                                | 7   | 960  |  |
| 3273  | 8770                                    | A   | 3535                                | 1538  | 2287   | WWSSKLRLIYYYSLFFFFFFFFG M*SYSVTQARVQWHHLGSLQPLPP GFKQFSCLSLPSSWDYRHPPHLANF LYF**RWGFTMLARLISNS*PQ/CDL PASASQSAGTTGLSHCAQ/LLFAFLT DNSVLIETALT*LQSCAS*KLN*IIPL ESSDFYTFFFETESHSV/TQAGVQCR NLGSLQPPPPRFKQFSCLSLPSSWDY KCTLPRPANFCIFTRQGFTMLARIVS PGSLGLMISLPRPPKVLGLQV                                    |
| 3274  | 8771                                    | A   | 3536                                | 3   | 263  | LGVGDRVSLCHPVWSASSL*SQTPG<br>LK*SSHLSLPSRWDNRHAPPCLA/SL<br>KNFCRDRGLTMLPRLVSNSWAQAI<br>LPPQLPEVLGLQV   |
| 3275  | 8772                                    | A   | 3537                                | 33  | 295  | AGMQWCSLGSLQPPPPVLRRSSHLS<br>LPSSWEYSHTC\NFCIFCRDGFAVLP<br>RLLG*SNRPASSS*NTGITGVSHRAQ<br>PSLFLSYSFFF   |
| 3276  | 8773                                    | A   | 3538                                | 3   | 33   |  |
| 3277  | 8774                                    | A   | 3539                                | 1   | 375  |  |
| 3278  | 8775                                    | A   | 3540                                | 3   | 340  | HEVVAA*YY\G*PSIAQEVAGTLAE<br>LDVTLQLLEDKFLQNKVFLTGPHIS<br>LADLVAITELMHPAGAGCHVF*GLP<br>TLATWRQLVEASPGEDLFQEVHEVI<br>LKATDFPPADHTI  |
| 3279  | 8776                                    | A   | 3541                                | 30  | 284  | YSVSTPLRDSPNPNHLSSLGHCPASS<br>QTEPQAPQQALGQPATKLLPHPQPP<br>/MPQPSSKP*VSATSLCTSPPLPPLCP<br>AGGSSGTT   |
| 3280  | 8777                                    | C   | 3542                                | 127   | 435  | MAASXNPEVLDITEETLHSRFLEGV<br>RNVASVCLQIGYPTXASVPHSIINGY<br>KRVLALSVETDYTFPLAEKVKAFLA<br>DPSAFVAAAXLGCCHHSCSXCCCSP<br>S*  |
| 3281  | 8778                                    | A   | 3543                                | 3   | 417  |  |
| 3282  | 8779                                    | A   | 3544                                | 2   | 881  | RGKLCAYGRPPMMRRSIEGN/LENN PASEELLPH*\RGHLGFCFT\RED\LT Ei\RDMLLA\NKV\PTAARCWCQLPP CEVTVPA\QNTGLG\PEKTSFFPGL* VSPTKNLPGGTH*KS*SYVQL\IKT\G DKMGSQTKAKAAEKMLKNLPPSPF GAGQPKQGV\RKNGKHPTNPESA*I STRGKLCHSRF\LGGCPANVAKCLS CKIGYP\TVASSTPIPII\NGYKRVPGP CLWTPDYTFP\LAEKVKAFL\ADPSC LCVLLPPVG\AATTACFALLLQPPA |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  KVEAKEESEESDEDMGFG\LFD   |
|---|---|---|-------------------------------------|---|--|--|
| 3283  | 8780                                    | A | 3545                                | 2   | 311  | DGVSLLLSPRLQWHNLGLLQPPPP* FKGFSCLSLPGSWDYRHV/PPCLAN FVFLVETGFRHVGQTGLELLTSGDP PASASQRAGITGVSHRTWQKMYFL SQKYF   |
| 3284  | 8781                                    | A | 3546                                | 1   | 290  | KTFFFFF*DRVLFCCPG*SAVAQ\SW<br>LTAALTSWAQGSS*DHRLKP/HMLS<br>FFYFCRQGLTMLPKVVLNSWAQAI<br>LPPQPPM*PGLQACTYAWSLRAL   |
| 3285  | 8782                                    | A | 3547                                | 229   | 486  | IKIKINQAWVCACLSLPSSWDYRHG<br>PPHPANF\FVFFLVETGF\TMRARLA<br>SNS*PCDPPTSASQSAGITGVSHRAG<br>CSEAFRSQV   |
| 3286  | 8783                                    | A | 3548                                | 2   | 431  | ARGSIYQNDTTI\*NMYLDNRASECT<br>VRELVKQK/R*MEKPTIIFGDFNNPV<br>SLIEGSSK*KISGTMENLKNTANFT*<br>LIFIKCSAQQHQNAHSFPV/PHRTF/S<br>KIDHFLWCKRGLNKCKMIQIIQNVV<br>CDHTALNKKPMPERSLEK   |
| 3287  | 8784                                    | A | 3549                                | 2   | 194  | VDFFFFLRWSI/NSVTQAGVQWRN<br>LGSLQALPLGFMPFSCLSLPSSWDY<br>RCPPPAHPANFFLHF**RRGFTVLAR<br>MVSIS*SHDPPASDSQSAGITGLSHR<br>AR/LKGHYDF*EMAC/HLICKRGRQ<br>VP*LFFFFFEMEYHSVTQAGVQWR<br>NLGSLQALPLGFMPFSCLSLPSSWD<br>YRCPPPAHPANFFLHF  |
| 3288  | 8785                                    | A | 3550                                | 2   | 489  | ARGTQALMMMT/GTACHASPH*GG<br>RLTS*PGAICFTHGDMAA*WREESC<br>LLVT/WDLVMSEGLGMRYAFIGPLE<br>TMHLNAEGML\SYCDRYSEGIKHV<br>VQTFGPIPEFSRA\TAEKVNQDMCM<br>KVP**PGSTLAAR\RHW\RDE\CLM\R<br>LAQV*RSSSCSPQLNFLC   |
| 3289  | 8786                                    | В | 3551                                | 13  | 441  | MEGVEEKKKEVPAVPETLKKKRRN<br>FAELKIKRLRKKFAQKMLRKARRK<br>LIYEKAKHYHKEYRQMYRTEIRMA<br>RMARKAGNFYVPAEPKLAFVIRXR<br>GINGVSPKVRKVLQLLRLRQIFNGT<br>FVKLNKASINMLRDCRAIYCMG*   |
| 3290  | 8787                                    | A | 3552                                | 1   | 775  | RRVPA\VPETLKKKRRNFAELKIKR L\RKKFAQQML\RKAR\RKLIYEKAK H\YHKEYRQMYRT*NFEWARMGK KKLANF\YVPAEPQIWRFVIRIRGI\N GVSPKGSERFFQLLRLRQI\FNGNLL *KLNQGFRFNMAEDF*SPYIAMGGT PNLKVSKMN*SYKRGLWAKSNKK R\IAL\TDNAL\IARSLGKIRHILAWE DLIHEIYTV\GKRFK\EANNFLWP\FK LSFSTKVEMKKKTTHF\VEGGDAGN R\EDQINRLIRRMN |
| 3291  | 8788                                    | A | 3553                                | 1   | 356  | SHHVQLLFEFFVEMGSPCVSQAVL*<br>LLGSSDPPVLASENVGIK/GPPHPA*<br>S*F*IIACVFVYIYFLEMGSCSFAQA<br>GVLWYNHSSLQR*TPGL*QISLLSPL<br>SSWDYRHVPPCLVIYF  |

| SEQ ID      | SEQ ID   | 12.4                                    | CEO IN NO             | Marchael                  | INI I                          | Marino soid soons (V. H.)  |
|-------------|----------|---|-----------------------|---------------------------|--------------------------------|--|
| NO: of      | NO: of   |   | SEQ ID NO:<br>in USSN | Nucleotide<br>location of | Nucleotide<br>location of last | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide  | d                                       | 09/770,160            | first codon               | codon for last                 | nucleotide insertion)  |
| sequence    | sequence |   |                       | for peptide               | amino acid of                  | ,  |
| ļ           |          |   |                       | sequence                  | peptide                        | ]  |
| 2000        | 0700     | <del>-</del>                            | 0.7.7.1               | <u> </u>                  | sequence                       | `  |
| 3292        | 8789     | A                                       | 3554                  | 3 .                       | 352                            | HEGFTMLVRLVSNS*HRDPQASASQ  |
| 1           | •        |   | ļ                     |                           | [                              | SAGITGVSHHANP/CFFLTESNWVA  |
|             |          |   |                       | Í                         |                                | QAGVQWRVLS*LQPPPA*FKGFSCL  |
| ļ           |          |   | Į                     | ]                         | }                              | SILSSLS/WGYRCLPP/HPANFFFF*K  |
|             |          |   | <u> </u>              |                           |                                | GFFFWFPSWNAMGKKWFN   |
| 3293        | 8790     | C                                       | 3555                  | 55                        | 201                            | MPKNYPRLWWQHVCNPQPTWEAE  |
|             |          |   |                       | 1                         |                                | VGELLEPQEAEVAVSQDHATALQP   |
|             |          |   |                       |                           |                                | G*   |
| 3294        | 8791     | A                                       | 3556                  | 3                         | 212                            | QEFFFFFEM*SRCVT\RLEGSGAISA   |
|             |          |   |                       |                           | ]                              | HCKLCLPGSCHSPASASQDSIFNTQ  |
|             |          | ]                                       |                       | )                         | ]                              | HLNVGRNSTSKSKPIDYF   |
| 3295        | 8792     | A                                       | 3557                  | 2                         | 265                            | EKESRSVTRLECRGAISAH*NLHLP  |
| 3273        | 0,72     | 1                                       | 3337                  | 1                         | 203                            | GSSHSPPSASHVAGTTGACTT/AQLI   |
|             |          |   |                       | ľ                         |                                |  |
| }           | ł        |   |                       |                           | }                              | FFVFLVETGIHHVGQDGLNHL/NLVI   |
| 2206        | 0702     | +-                                      | 2550                  | 254                       | 675                            | RLPQPPKVLGLQA  |
| 3296        | 8793     | A                                       | 3558                  | 354                       | 675                            | HFISYFPDGAELTSSIRVPFFYSNVLF  |
|             | İ        | İ                                       |                       |                           |                                | FF/CRQESRCHQAGVQWHDLGSLQP  |
| ĺ           |          | 1                                       |                       |                           | ĺ                              | PPPGFKRFSCLSL*SS*DYRQAPPRP   |
| 1           |          | 1                                       |                       | Ì                         |                                | ANFCIFNRGPVSPCWPGWSQSPDFV  |
|             |          |   |                       |                           |                                | LVPNS  |
| 3297        | 8794     | A                                       | 3559                  | 1                         | 1203                           |  |
| 3298        | 8795     | Α                                       | 3560                  | 2                         | 634                            | VNTEKLTAFVNTLNGKNGTGSHLV   |
|             |          |   |                       | 1                         |                                | TVPPGPS*ADALISSPILAGESGAML   |
| 1           | [        |   |                       | [                         |                                | GLGASDFEFGVDPSADPELALALRV  |
| ļ           |          |   |                       |                           |                                | SMEYQRQRQ\EEYARRAAAASAAE   |
| 1           | ł        | 1                                       |                       | 1                         |                                | AGIATTGTEGERDSDDALLKMTI\SQ   |
| Į           | }        |   |                       | Į,                        |                                | QE\FGRT\GLPDL\SSMTEEEQIAYA   |
|             |          |   |                       |                           |                                | MQMSLQG\AEFGQAESADIDASSA   |
|             |          |   |                       |                           |                                | MDTS\*PAKEEDDYDVMQDPEFLQS  |
|             | 1        | 1 1                                     | i                     | <b>(</b>                  |                                | VLENLPGVDPNNEAI  |
| 3299        | 8796     | $+_{A}$                                 | 3561                  | 506                       | 930                            | IRTTQIGLCLSQVYFIVFDLHAQYEII  |
| 3279        | 0770     | Δ.                                      | 3301                  | 300                       | 930                            | KATNITTPTLSKIISIRPRRFIFPVT*L   |
|             |          |   |                       |                           |                                |  |
|             |          |   |                       |                           |                                | LNMFAFSSPMVPVSLSQRIGTI*FLF   |
| 1           | 1        |   | 1                     |                           | •                              | RFFNT*IFSDGLTNRLTCSRFANCKV   |
|             | Ì        |   |                       | 1                         |                                | NPVIGSISKYVLCSSSFGFNPSIGSET  |
| 2200        | 0505     |   | 0.5.60                |                           |                                | SGLAYRK  |
| 3300        | 8797     | A                                       | 3563                  | 3                         | 271                            | FFLET*SCSVG\RLECSGVILAHCKL   |
|             |          |   |                       |                           |                                | RFPGSSDSPASASGVVGTTGAHHHT  |
|             |          |   |                       |                           |                                | RLFCIFSRDGFHHVGQDGLDLL/NL  |
| <u> </u>    |          |   |                       |                           |                                | VIHPPWPPKVLRLQA  |
| 3301        | 8798     | A                                       | 3564                  | 1                         | 218                            | ETGSPSVT\RLECSSIQ\SAHCNLDLP  |
|             |          |   |                       |                           |                                | GSSDPPVS\APQVAGTTGTCHNTQLI   |
|             | j        | ] ]                                     |                       |                           |                                | FVFFVEMGFCHLSQAVLQLLG*T\IH   |
|             |          |   |                       |                           |                                | PLWPPKVLGL*AQVILLSQTPQVAG  |
|             |          |   |                       |                           |                                | TTGTCHNTQLIFVFFVEMGFCHLSQ  |
|             |          |   |                       |                           |                                | AVLQLLG  |
| 3302        | 8799     | +                                       | 3565                  | 1                         | 294                            | ASTFFFFGDRVSLFLPRLEYNGAIS  |
| 3302        | 0175     | ^                                       | 2202                  | 1                         | 47 <del>4</del>                |  |
|             |          |   |                       |                           |                                | AHRNLC/LPGFSSDSPAS\AS*VAQD   |
|             |          |   |                       |                           |                                | YRHAPPHLANFVFLVETGFLHVGQ   |
| 2200        | 0000     |   | 0.7.6                 |                           |                                | AGLKLPELSVIHPPWPPKVLGLQA   |
| 3303        | 8800     |   | 3566                  | 3                         | 292                            | FFETKFSSVTQAGVQWHNLGSLQPP  |
|             |          |   |                       |                           |                                | PPAFKRFSCLSLPSSWDYRHLPPRPA   |
|             |          |   |                       |                           |                                | NF\*FLVEMGFHHVDHADLELPTSS  |
|             |          |   |                       |                           |                                | DPPTLASQSAGIIGVSHRARP  |
| 3304        | 8801     | A                                       | 3567                  | 3                         | 389                            |  |
| 3305        | 8802     | A                                       | 3568                  | 1                         | 672                            |  |
| 3306        | 8803     | A                                       | 3569                  | 1                         | 2018                           | MSDNGVRTGAPSTDQRTGMSVRAE   |
|             | <u> </u> | لــــــــــــــــــــــــــــــــــــــ |                       |                           |                                |  |

| SEQ ID      | SEQ ID   | Me  | SEQ ID NO:                                       | Nucleotide   | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop              |
|-------------|----------|-----|--|--------------|---------------------|--|
| NO: of      | NO: of   |     | in USSN  | location of  | location of last    | codon; /=possible nucleotide deletion; \=possible    |
| nucleo-tide | peptide  | đ   | 09/770,160                                       | first codon  | codon for last      | nucleotide insertion)                                |
| sequence    | sequence | l   | l  | for peptide  | amino acid of       |  |
|             |          |     | 1  | sequence     | peptide<br>sequence |  |
|             |          | +   | <del>                                     </del> | <del> </del> | sequence            | WRRGEFLVTGRRPLVGGGAGEEGE                             |
|             | 1        |     |  |              |                     | LGGDARSSRDPELQSYAAFVAVVT                             |
|             | Į.       |     |  |              |                     |  |
| j           |          |     | 1  | 1            | ĺ                   | RIWLPAPRCPALGGLASGPGKAEQF                            |
|             |          |     |  |              |                     | SRSLYLPDHLGEGNGGLLGKSLEPY                            |
|             |          |     |  |              |                     | RSACMSAAGLKITGSKETKRRLLLI                            |
|             |          |     | (  |              |                     | SIDWSRDLMNLCIYFRVYCQEKQEE                            |
|             |          |     |  |              |                     | RRELPRIITGPPPEAAVVAFEWLKTS                           |
|             | ĺ        |     | ĺ  | ľ            |                     | TLTGLHPQLPLSLPQPECALPYLVR                            |
|             | Į.       | 1   |  |              |                     | AFSRGDYMGRIQEVGWVTAGLVIW                             |
| 1           |          | 1   |  | 1            |                     | AGTCYYIYKFTKGRAQSVRTLARN                             |
|             |          |     |  | 1            |                     | GSTVKMETVVGVQSQTLAINEAEIK                            |
|             | ł        | 1   | }  | 1            |                     | TKPQVEIGAETGARSGPRAEVETKA                            |
|             | ĺ        | 1   |  | 1            |                     | TAIAIHRANSQAKAMVGAEPETQSE                            |
|             |          |     |  |              |                     | SKVVAGTLVMTEAVTLTEVKAKAR                             |
|             |          |     | }  | ]            |                     | EVAMKEAVTQTDAEAGKIVKKEAV                             |
|             |          |     |  |              |                     | TQTKAKAWALVAKTEAKREAMTQ                              |
| 1           | Į        |     |  | 1 .          |                     | TKAETHILAEKETEINRVMVTQSET                            |
|             |          |     |  |              |                     | LAVPREVAKMGATNKTGIVDETKT                             |
| Į.          | }        | 1   |  |              |                     | RALEETVSVAKTQSEARPGATVDA                             |
|             | ļ        |     |  | 1            |                     | RGNPNGMSREVAGVDMKSCAQSQ                              |
| 1           |          |     |  | ] ]          |                     | AVTKIQGDDMPGTGVEDMGNCKT                              |
|             |          |     |  | }            |                     | MSRAESGADTRASAQPQIFAKTQTE                            |
|             |          |     |  |              |                     | AIPGAKIDAGGNTNAMCKVGAGAD                             |
| )           |          |     |  | 1            |                     | VRACIQPQTVAKKQAEVTSGARVD                             |
|             |          |     |  |              |                     | GRGNTNVISKAITGADMRAAAQPQ                             |
| ]           |          |     |  | ]            |                     | AVASTHAEAMSDAKVKNRGNPNA                              |
|             |          |     |  |              |                     | MTKAGAKANLRANSQVEALPDAR<br>DKSRGNPNVMAKVGDGTDMLSCT   |
|             |          |     |  |              |                     |  |
| !           |          |     |  | [ [          |                     | QPQLVASVQADTLSDGKIKVRGNV                             |
|             |          |     |  |              |                     | NTMPKEGAGVDMKAQGMAQSQGE<br>ALPNTRGKARGKAKAKCKTGPGM   |
|             |          |     |  | ĺ            | j                   |  |
|             |          |     |  |              |                     | DMKTCTQPQAGVKTPAEALLDSRV<br>DGRGNPNATSKAGTKADQRVCGQP |
|             |          |     |  |              |                     |  |
|             |          |     |  | ĺ            | ĺ                   | LVVANPQGEALPGAKNKVKGNPHT<br>VLKVGAGEGTTDSAQPEAVVSFOG |
|             |          |     |  |              |                     | EALLGTKNKVKGNPNVVLKAEVGE                             |
|             |          | 1 1 |  | !            |                     | GAMGTAQLQIMASSKGEALLDSKN                             |
|             |          | 1   |  |              |                     | KVKGNSNAVSKAGAGTDTTGSVQP                             |
|             |          | 1 1 |  |              |                     | QIVANSQGEVLPGAKNKIRGNPTTV                            |
|             |          | 1 1 | ĺ  |              |                     | PNSGVGPYTTDSARLQAVANSQGE                             |
|             |          |     |  |              |                     | VLPGAKNKVKANLNAVSKAEAGM                              |
| i           |          | 1 1 |  | Ì            |                     | GATGSVQPQAVANSHCETLPGAKN                             |
|             |          |     |  |              |                     | KVRGNWNAVSKAGAGMDTRGSAQ                              |
|             |          |     | 1  | 1            | 1                   | PQAVANSQGEVLPGAKNKVKGNPN                             |
|             |          |     | l  | [            |                     | VVSKAGAREDTVGSTQPQVLASSQ                             |
|             |          |     | }  |              |                     | RETLPGARNKVKGNSNVVSKAGAR                             |
|             |          |     |  | 1            |                     |  |
|             |          |     | ļ  | ]            |                     | EDTMGSAQPQVVANSQRETLPGAR<br>NKVKGNSNAISKAEAGAGIMGSVO |
|             |          |     |  |              |                     |  |
|             |          |     |  |              |                     | VQVVASFQGEVLPGAKNKVRGNSN AVPKAFAGADTVGSAODOAVANSO    |
|             |          |     |  |              | J                   | AVPKAEAGADTVGSAQPQAVANSQ                             |
| j           |          |     |  |              |                     | SETLLGARNKVKGNTIAVPKAGTG                             |
| 1           |          | }   | J  |              | ļ                   | AGTRHSAQPQIVAGSQGETLPGARD                            |
|             |          |     |  |              | İ                   | KSMSTSEAEATAEDEAYAKPEAEA  MDTSESECCSCTOACDATORNALDAY |
|             |          |     |  |              |                     | MPTSESEGGSGTQACRKTQPNIHDY                            |
| [           |          |     | [  | -            | ĺ                   | YWNGIGVEDWIAAERWIKFRFQTM                             |
|             |          |     | 1  | ļ            |                     | DGDWENSVSWADDENEASIGSWSG                             |
|             |          |     | . 1  |              | i                   | ASDKAGIIRSWAVACDETSVKSWA                             |
|             |          |     |  |              | 1                   | GARAENVVGIGTWARAGEQASGGL                             |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   | sequence   | WAGGQTSEGTWAGDKASGGAWT GAENQASGGSWALAGNQAIGELW AAGQASDGSWPGGQASGVSWVGE EAIGGSWTGAENQASEGSWAGAGA GNMSSVSYWAGVVDQAGGGSWA GTSDQSGGGSKPFEDQASGEGSW AGAGGQASGGSMLGPEDQSSGRSW ADTADQASGGSRLGHVVDQSSGA WAGTLDQSGGGSKPFENQTTEEG SWAGAGGQAGGGSKVGPEDQSSG RSWANSGDQISGGFLVGIVDQANG GSWTGAGHPASVGPKPIFEDQVSGR GSWADAREQVVGDSRLGLRDQSSG DSWAGTGDQASGWFCVCPGSQTN GGSWGGASGQDVGGSRPGPTNQSS AGSWDSPGSQVSGSCWTGAGAVD QAGGCSKPGFEDQAIGGGFWPGAG DQTGGGSRPGSEDQSSGIGSWGVA GGQVLGGARPGPADQSSGGSWAGT GNQSSGRSWIGPGDQAVDCSKPEFE DQACGGGSWAGAGSQASGESWAG SRPGNEAIGGSRMGSEDQATGGSW ARSEDQASGRFQVSFEVEANEGFW FGPGAEAVIGSWCWTEEKADIVSRP DDKDEATTASRSGAGEEAMICSRIE AENKAKSRLGAGEEAGVESWTLAR NVGEDELSRESSPDIEEISLRSLFWA ESENSNTFRSKSGKDASFESGAGDN TSIKDKFEAAGGVDIGSWFCAGNEN TSEDKSAPKAKAKKSSESRGIYPYM VPGAGMGSWDGAMIWSETKFAHQ SEASFPVEDESRKQTRTGEKTRPWS CRCKHEANMDPRDLEKLICMIEMT EDPSVHEIANNALYNSADYSYSHEV VRNVGGISVIESLLNNPYPSVRQKA LNALNNISVAAENHRKVKTYLNQV CEDTVTYPLNSNVQLAGLRLIRHLT ITSEYQHMVTNYISEFLRLLTVGSGE TKDHVLG*EQRQSQCHD*SRGQGK LEGQFPG |
| 3307  | 8804                                    | A | 3570                                | 1   | 611  | YAALGADVTRVSLPTPRCPALGAL ASGPGESGPTLLQDCGAKCPG/GPQ PRGENREKEETTRIGPGVMESKEKR AVNSLSMENANQENEEKEQVANK GEPLALPLDAGEYCVPRGKS*GGSA FRAAHP\EYRWDMMHRPWRTHRPR DEEKRIMEKDWGGGETADGKKLE GEKPVGVISLRGESGTDPPSPMTHH D*VFALLPLNP   |
| 3308  | 8805                                    | A | 3571                                | 1   | 379  | EMESHSV\TRLECS/GTILVHCNLCL<br>LGSSDSPASAFQVAGITGVHYNA*V<br>IFVF\LVETGFCYVGQAGLEFLTSTD<br>PPASGFQNCWNYRDEKPHPAETVS<br>KTTTTKNYICVSTINYKKKNLGLSNI<br>L  |
| 3309  | 8806                                    | A | 3572                                | 6   | 222  | DRVSRSAAQAGV/QWC/NLSSLQPL<br>PPRFK*FSCLSLPSTWDYRHTPPRPA<br>NFCIFSRDRVSPCWAGWSQSLDLK   |

| SEQ ID      | SEQ ID   | Me            | SEQ ID NO: | Nucleotide    | Nucleotide       | Amino acid sequence ( X=Unknown; *=Stop                 |
|-------------|----------|---------------|------------|---------------|------------------|---|
| NO: of      | NO: of   |               | in USSN    | location of   | location of last | codon; /=possible nucleotide deletion; \=possible       |
| nucleo-tide | peptide  | d             | 09/770,160 | first codon   | codon for last   | nucleotide insertion)                                   |
| sequence    | sequence | 1             | ł          | for peptide   | L .              |   |
|             |          |               |            | sequence      | peptide          |   |
| 3310        | 8807     | $\frac{1}{A}$ | 3573       | 1             | sequence<br>445  |   |
| 3311        | 8808     | A             |            | <del> </del>  | 3212             | DSINNLQAELNKIFALRKQLEQDVL                               |
| 3311        | 0000     | 1 11          | 33,4       | 1 *           | 3212             | SYQNLRKTLEEQISEIRRREEESFSL                              |
| 1           |          |               |            | 1             |                  | YSDQTSYLSICLEENNRFQVEHFSQ                               |
|             |          | Ì             |            |               |                  | EELKKKVSDLIQLVKELYTDNQHL                                |
| 1           | }        |               | Į.         | 1             | }                | KKTIFDLSCMGFQGNGFPDRLASTE                               |
| 1           |          |               |            | }             | 1                | QTEIMKDLSKGGCKNGYLRHTESKI                               |
| }           |          |               | ]          |               |                  | SDCDGAHAPGCLEEGAFINLLAPLF                               |
|             |          |               |            |               | 1                | NEKATLLLESRPDLLKVVRELLLGQ                               |
| [           |          |               | 1          |               | [                | LFLTEQEVSGEHLDGKTEKTPKQKG                               |
|             |          |               |            | ł.            |                  | ELVHFVQTNSFSKPHDELKLSCEAQ                               |
| 1           |          | 1             | 1          | }             | İ                | LVKAGEVPKVGLKDASVQTVATEG                                |
| 1           |          |               |            | }             | }                | DLLRFKHEATREAWEEKPINTALSA                               |
|             | 1        |               |            |               |                  | EHRPENLHGVPGWQAALLSLPGITN                               |
|             |          |               |            |               |                  | REAKKSRLPILIKPSRSLGNMYRLPA                              |
|             |          |               |            |               |                  | TQEVVTQLQSQILELQGELKEFKTC                               |
|             |          |               |            |               |                  | NKQLHQKLILAEAVMEGRPTPDKT                                |
|             | 1        | 1             |            |               |                  | LLNAQPPVGAAYQDSPGEQKGIKTT                               |
|             | Ì        | 1             |            | 1             |                  | SSVWRDKEMDSDQQRSYEIDSEICP                               |
|             |          |               |            |               |                  | PDDLASLPSCKENPEDVLSPTSVAT                               |
|             |          |               |            |               |                  | YLSSKSQPSAKVSVMGTDQSESINT                               |
|             |          | 1             |            | 1             |                  | SNETEYLKQKIHDLETELEGYQNFIF                              |
| j           | J        |               |            | ]             |                  | QLQKHSQCSEAIITVLCGTEGAQDG                               |
|             |          |               |            |               |                  | LSKPKNGSDGEEMTFSSLHQVRYV                                |
|             |          |               |            |               |                  | KHVKILGPLAPEMIDSRVLENLKQQ                               |
| 1           |          | 1 1           |            | Ì             | 1                | LEEQEYKLQKEQNLNMQLFSEIHNL                               |
| ł           |          |               |            |               |                  | QNKFRDLSPPRYDSLVQSQARELSL                               |
|             |          |               |            | ł /           |                  | QRQQIKDGHGICVISRQHMNTMIKA                               |
|             |          |               |            |               |                  | FEELLQASDVDYCVAEGFQEQLNQ                                |
| J .         |          | ] ]           |            | ] ]           |                  | CAELLEKLEKLFLNGKSVGVEMNT                                |
|             |          |               |            |               |                  | QNELMERIEEDNLTYQHLLPESPEPS                              |
|             |          |               |            |               |                  | ASHALSDYETSEKSFFSRDQKQDNE                               |
|             |          |               |            |               |                  | TEKTSVMVNSFSQDLLMEHIQEIRT                               |
|             |          |               |            |               |                  | LRKRLEESIKTNEKLRKQLERQGSE                               |
| 1           |          | 1 1           |            | l             |                  | FVQGSTSIFASGSELHSSLTSEIHFLR                             |
|             |          |               |            |               |                  | KQNQALNAMLIKGSRDKQKENDKL                                |
|             |          | 1 1           |            |               |                  | RESLSRKTVSLEHLQREYASVKEEN                               |
|             |          |               |            |               |                  | ERLQKECSE\KERHNQQLIQEVRCS                               |
|             |          | ]             |            |               |                  | GQELSRVQEELKLRQQLLSQNDKL                                |
|             |          |               |            |               |                  | LQSLRVELKAYEKLDEEHRRLREAS                               |
|             |          | 1 1           |            |               | ĺ                | GEGWKGQDPFRDLHSLLMEIQALR                                |
|             |          | 1 1           | Ì          |               | ĺ                | LQLERSIETSSTLQSR\LKEQLARGA                              |
|             |          |               | l          |               | i                | EKAQEGALTLAVQAVSIPEVPLQPD                               |
|             |          |               | l          |               |                  | KHDGDKYPMESDNSFDLFDSSQAV                                |
|             |          |               | ļ          |               |                  | TPKSVSETPPLSGNDTDSLSCDSGSS                              |
|             |          |               | ,          |               |                  | ATSTPCVSRLVTGHHLWASKNGRH                                |
|             |          |               |            |               |                  | VLGLIEDYEALLKQISQGQRLLAEM                               |
|             |          |               |            | İ             |                  | DI\QTQEAPSSTSQELG\TKGPHP\AP                             |
|             |          |               |            | j             |                  | LSKFVSSVSTAKLTL\EEAYR/RGLK                              |
|             |          |               |            | 1             |                  | LLW\RVSLPEDGQLPLHCEQIWRNE                               |
|             |          |               |            | ł             | -                | RQRVPKLHKKLFEQEKKFAKTP*RF<br>LQLSK\RQEKVIFDQ\LVVTHKILRK |
| ŀ           |          |               | 1          |               | 1                | ARGNLELRPGGAHSRT\CSPSR\PGS                              |
|             |          |               | 1          |               |                  |   |
|             |          |               |            |               | ļ                | ALATRKEHRNQQHSAEQASRNSWQ<br>GGQRRHRKEPSLWLSKPCPSLRCPF   |
| ſ           |          |               | ſ          |               |                  | SLTNTMVTNIPWKVIIHLICLIPPRQ                              |
| 3312        | 8809     | A             | 3575       | $\frac{1}{1}$ | 1362             | SGNIKVLERFLYIDTKFSQNRCQKA                               |
|             |          |               |            | 1             | 1302             | LPMAHSAYQSNLPHNYTMTVHNN                                 |
|             |          |               |            |               |                  | Printing I COMPLUIA I IMI A HIMI                        |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         | sequence   | QLAQALRVYSQHAIGAVLYKYSMQ VHEDCYKFWSNG\MQLCEERSLTD QHCVHKFHSLPKSGEKPEADRNPPV LYHNSRARSTGACNCGRKQAPRDD PFDIKAANYDFYQ\FWEEKCCGKIG S\YSISQYLEPSTPGSWLLA*KWNP/ RPAPPDSDADKLKEKEPQTQGESTS LSLALSLGQSTDSLGTYPADPQ/DRR R*SRSSWSSRSEN/SRRDQTSLIDRH/ LTVEYLPGMLHSNCPKGLLPTFSSW VFVKLGPG*SYNFHTRFR/NQQGFIP GNKLSYALGTLSSRARSWR*RRLR HKLLACSK*SYSWKEKCGCNGKRK TAR*H\TRAFVGFEYEDSRGRRFMC SGALTK**K*WGSGA/IRDSAFKSP*I VDMPLYI\RHPLKVEGLKTLITLQL MRLFVVVPDASFAR |
| 3313  | 8810                                    | A | 3576                                | 1                       | 673  | EGGWMEDYDYVHLQGKEEFEMTH IELLDKGSITRQGMSQL*LEQLKLFV RLEQEVSRPIDHDLAIWTPAQPLAP GRSGG\LGPSDRQLLLFYLEQCEAN LTTLTNAVDAFFTAV\ATNQPPKILV GASKVVLL\SAHKLVFIGDTLSRQA K\AADVR\SQVTHYSNLL\CDLL\QGI VATTK\AAALQYPIAFPGPKDMV/E KRVKELGHSTQ\QFPPRS*GQLGSPP EGW   |
| 3314  | 8811                                    | A | 3577                                | 3                       | 531  | FFLLQSL/DSAGQARVQWCDLGSLQ<br>PLPPRFMRVSCLSLLSSWDYRHLPP<br>RLAMIFVFLVE\QGFTVLARLFSNS*<br>PQ/CDPPTSASQSAGITGMSHHA\RL<br>FLFFETGSGSIAQGGVQ*CNLGSLQP<br>LPPRLKPSSHLSLLSS*DYRRVPTCP<br>SNFCIFGRDGVSPCCPDWSGTPGLK  |
| 3315  | 8812                                    | A | 3578                                | 1                       | 223  | GSGGIHRLPLSSRPEQPIVWLWAPG<br>CFSHLSRLQVTV*/GEIKQRCRELHH<br>SLAQHPRHQAGNHISHPILHLKIL  |
| 3316  | 8813                                    | A | 3579                                | 3                       | 341  | FFETESCSVSQAGVQWRDLGSLQA<br>LPPGFTPFSCLSLPSSWDYRHLPPHP<br>ANF/SVFLVETGFHRVSHDGLDLLT<br>RDPPTSASQSAGITGVSHRARPIVAI<br>FMFCEYPLFSSHF   |
| 3317  | 8814                                    | С | 3580                                | 168                     | 347  | MTYGLLFLGNNPHLNLYXXXXXX<br>XXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 3318  | 8815                                    | A | 3581                                | 852                     | 1216   | GFLINGNTDFFFFETESRSVAQGGV<br>QWRDLGSLQPLPPGFKRFSCLSLPSS<br>WDYRHLPQYPS*IFVFLVETGCSSIY<br>STIL**RP\HVGQAGLELLTPGDPPAS<br>TSQNAGITGLSHRTWSAI   |
| 3319  | 8816                                    | A | 3582                                | 2                       | 238  |  |
| 3320  | 8817                                    | Α | 3583                                | 680                     | 891  |  |
| 3321  | 8818                                    | A | 3584                                | 697                     | 979  | IFGVSQGYYKILWKMNSLPGVSFES<br>KRSF*QK*LQILSS*FAKKIFYWHEN<br>NRCKWRPNIPLKCIYSITSQKLFYPS<br>LLFFPLLPTFLGVGGAR   |
| 3322  | 8819                                    | Ā | 3585                                | 2                       | 518  | GRGYQNPGRQCTSDRLSEHVSEGES  |

| SEQ ID      | SEQ ID   | Me            | SEQ ID NO: | Nucleotide  | Nucleotide          | Amino acid sequence (X=Unknown; *=Stop                |
|-------------|----------|---------------|------------|-------------|---------------------|---|
| NO: of      | NO: of   |               | in USSN    | location of | location of last    | codon; /=possible nucleotide deletion; \=possible     |
| nucleo-tide | peptide  | d             | 09/770,160 | first codon | codon for last      | nucleotide insertion)                                 |
| sequence    | sequence |               |            | for peptide | amino acid of       |   |
| j           | Ţ        | ]             |            | sequence    | peptide<br>sequence |   |
|             |          | 1             |            |             | l                   | PPDSQEDSFQGRQKSKDKAATPRK                              |
|             | 1        |               |            |             |                     | DGPKRSVLSKSVPGYKPKVIPNAIC                             |
| }           |          |               | }          | ]           | J                   | GICLKGRESNKERKG*IHFIHCSQCE                            |
|             |          | 1             |            |             | 1                   | NSG\HPSCLDMTNGACFYD*DLTPW                             |
|             |          |               | 1          |             |                     | QCMECKTCHICG\NPHHEEEMMFC\                             |
|             |          |               |            | <u> </u>    |                     | DMCDRGYHTFCGGPGSNPTRPLNL                              |
| 3323        | 8820     | A             | 3586       | 1           | 165                 | SLEDRVLLCHPGTAYCSLELLGSISP                            |
|             |          |               |            |             |                     | PALTLTSEAS\LPGRDYREIPGSPCQL                           |
| 0001        | 0001     | <del> </del>  | 2505       | ļ           | 240                 | FL  |
| 3324        | 8821     | A             | 3587       | 1           | 249                 | LVDRVLLCHPGTA/VLQP*TPGINQS                            |
| 1           |          | -             | ļ          | 1           |                     | SCLSLPSS*D\YRYVPPCLVYCFIFLA                           |
| 1           | ĺ        | 1             |            |             |                     | EMGLTVLPRLISNSWPQAILPSQPPK                            |
| 3325        | 8822     |               | 3588       | 3           | 282                 | VLGLQT<br>NSWDYRHPLSCLANFCIFSRDGGFT                   |
| 3323        | 0022     | A             | 3388       | 3           | 202                 | ILTKLVLNS*PRDPAASASQSVGITG                            |
| 1           | İ        | İ             |            |             | [                   | VSTHGLASWN\FNKLKNSYTQVD*L                             |
|             | 1        |               |            | 1           |                     | GSQEWPLKVCLAKPRTAS                                    |
| 3326        | 8823     | $\frac{1}{A}$ | 3589       | 1           | 714                 | OBOL WILLIA OLDANI KIAS                               |
| 3327        | 8824     | $\frac{1}{A}$ | 3590       | 1           | 726                 | MAEGETESPGPKKCGPYISSVTSQS                             |
| 332,        | 0021     | '`            | 33,0       | 1           | 120                 | VNLMIRGVVLFFIGVFLALVLNLLQI                            |
|             | 1        | 1             |            | 1           | {                   | QRNVTLFPPDVIASIFSSAWWVPPC                             |
|             |          | -             |            | 1           |                     | CGTASAVIGLLYPCIDRHLGEPHKF                             |
|             |          |               |            |             |                     | K\REWSSVMRCVAVFVGINHASAK                              |
|             | 1        |               |            | 1           | }                   | VDFDNNIQLSLTLAALSIGLWWTFD                             |
|             |          |               |            |             |                     | RSRSGFGLGVGMLF\LATVVTHL*V                             |
|             | 1        | 1             |            | 1           |                     | YNGVYQYTSPDFLYV\RSWLP\CIFF                            |
| 1           | 1        | -             |            | 1           |                     | AGGITMGNIGR\QLAMYECKVIAEK                             |
|             |          |               |            |             |                     | I/LIRNEEGKK\YLLYRKAR                                  |
| 3328        | 8825     | A             | 3591       | 469         | 537                 | PGLARRAMASGRSHGWP*IPPLRST                             |
|             |          | 1             |            | 1           | 1                   | FQGGRTLDAAFTRINCHGKTYLFKG                             |
|             | [        | 1             |            |             |                     | SQHWRFEDGVLDPDYPRNISDGFD                              |
|             | 1        |               |            | -           | 1                   | GIPDNVDAGLALPAHIYSGRERVYF                             |
|             |          |               |            | 1           |                     | FKGKQYWEYQFQHQPNLEEREGSS                              |
|             |          |               |            |             |                     | LSAVFEHFAMMQRDSWEDIFELLF                              |
| ]           | }        |               |            |             |                     | WGKTSAGTRQPQFINLDWHGEPWQ                              |
| 2200        | 0006     | +-            | 2500       | 162         | 204                 | ADAAMAGRIYISG   |
| 3329        | 8826     | A             | 3592       | 193         | 384                 | ADODAMADI DDI YIL AYY ANDIATA                         |
| 3330        | 8827     | A             | 3593       | 96          | 1635                | ARSPAMAPLRPLLILALLAWVALA                              |
|             |          |               |            |             |                     | DQESCKGRCTEGFNVDKKCQRDEL                              |
|             |          |               |            |             |                     | CS\YYQSCCTDYTAECKPQVTRGDV<br>FTMPEDEYTVYERLGEEKNNATVH |
| 1           | 1        | 1             |            |             | [                   | EQVGGPSLTSDLQAQSKG\NPEQTP                             |
|             |          |               | :          |             |                     | VLKPEEEAPAPEVGASKPEGIDSRPE                            |
|             | 1        | 1             |            |             | 1                   | TLHPG\RPQPPAEEELCSGKPFDAFT                            |
| 1           | 1        | 1             |            |             |                     | DLKNGSLFAFRGQYCYELDEKAVR                              |
|             |          | İ             |            |             |                     | PG\YPKLI\RDVWGIEGPI\DAAFT\RI                          |
|             | 1        | l             |            |             |                     | NLFRGRPYLFKG*\QYW/RAFEDGV\                            |
| 1           | 1        | 1             |            |             |                     | LGPWIYPRNISWTAFDGHSPGQTW                              |
|             |          |               |            |             |                     | D\AALGLPCPLAYSGRERV\YFFQRG                            |
| }           | 1        | 1             |            |             |                     | KQYW/ESYQFPGTSPVQEECEGSSL\                            |
|             |          |               |            |             |                     | SAVF\EHFAMM\QRDSW\EDIF\ELLF                           |
|             | 1        | 1             |            | }           | 1                   | \WGAERSGWVTR\QPQFHLAGEW\H                             |
|             |          |               | •          |             |                     | GVPG\QVD\AAMG\GRILHLQGMAT                             |
|             |          | 1             |            |             |                     | RPLLWPKKK\RFRH\RNR\KGYRS\Q                            |
|             | 1        |               |            |             |                     | R\AHSRGR*PETPRRP\SRA\MWLSF                            |
|             | l        |               |            |             | 1                   | VLPSEESNLGA\NNY\DDYRMD\WL                             |
|             |          |               |            |             |                     | VA\ATCEPIQECFFFSFGDKYYRVNL                            |
|             |          |               |            |             |                     | RTRRVDTVDPPYP\RSIAQYWLGCP                             |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho                | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  APGHL   |
|---|---|--------------------|-------------------------------------|---|--|---|
| 3331  | 8828                                    | $+_{\overline{A}}$ | 3594                                | 44  | 166  | 711 0110  |
| 3332  | 8829                                    | A                  |                                     | 3   | 1173   | SSAPEAAKKPTPCHRCRGLVDKFN QGMVDTAKKNFGGGNTAWEEKTL SKYESSEIRLLEILEGLCESSDFECNQ MLEAQEEHLEAWWLQLKSEYPDLF EWFCVKTLKVCCV\PGT\YGPDCLA CQGGSQRP\CSGNGHCS\GDGSRQG DGSCRCHMGYQGPLC\IDCMDRLL QLRSRNETHSI\CTAVRTGLSDSYPP CCLSLGCWRGVGHAWIRGRNTHTQ PGYSSRVWIAAFSPACDESCKTCSG LTNRDCGECEVGWV\RTRAPCVDV EKCAAQT\PPCSAAQFCKNANGSYT |
|   |   |                    |                                     |   |  | CE\ECDSSCVGCTGEGPGNCKQCIS<br>GYAREHGQ\CADVERVPH*PEKTLC<br>EEKTKTCYNTPG\SY\VCVCPDGFEE<br>T/RRCLCAAGRRLKPQKGESPTQLP<br>LP   |
| 3333  | 8830                                    | С                  | 3596                                | 1   | 300  | MRSFGQLTLCPRNGTVTGKWRGSH<br>VVGLLTTLNFGDGPDRNKTRTFQA<br>TVLGSQMGLKGGAGSVWLQAAGL<br>GLLPASLLWPSLLCHCYVLPPAPGV<br>PLV*  |
| 3334  | 8831                                    | A                  | 3597                                | 359   | 1229   | MPQPPTLGQEMTGPSQPWTGKGGL<br>PGP*QLRAKAQEVDSHLGRKKIKQ<br>QNRSKSC   |
| 3335  | 8832                                    | A                  | 3598                                | 2   | 311  | VRWNSAAPLVTSRGAPASARPRGQ<br>ALPGGSAPSAPHGQLPGRAQPAPVS<br>GPPPTSGLCHFDPAAPWP\PGLGLG<br>MLPPHPQDWPAQP*HPPGLGLFFEIF<br>SAS   |
| 3336  | 8833                                    | A                  | 3599                                | 1   | 426  |   |
| 3337  | 8834                                    | A                  | 3600                                | 18  | 738  |   |
| 3338  | 8835                                    | A                  | 3601                                | 65  | 425  | RLPQPPGAAVGGSTRPCPSWKAVR<br>VDLVVAPVSQFPFALLGWTGSKLF<br>QRELRRFSRKEKGLWLNSHGLFD/R<br>GAGKQQWQDS*VTEVLLLLQKTFF<br>QAASEEDIFRHLGLEYLPPEQRNA   |
| 3339  | 8836                                    | A                  | 3602                                | 3   | 233  | FFFFFKTLQIPLLLSPPPPGPCRVQSL<br>LPNPFPEKGA\PPFQTDERGQDFRLD<br>PPLGSPSPRV*SLNCYVPVPPKEK   |
| 3340  | 8837                                    | A                  | 3603                                | 7   | 510  | THAPAPSPRAQAP*PLFIHCP*APRV TPPPPQPVKCVVPAEVI/SPPPPGPCR VQSLIPLTRFPEKGAYLLSRQMKRG QDFKAGIQPLGLSLPQPGSTGRGRV TAGD   |
| 3341  | 8838                                    | С                  | 3604                                | 846   | 989  | MKSYNGMREMGDQASRRKLIKNW<br>TDSKFLDMENGEQKKITPRPGVKI*  |
| 3342  | 8839                                    | A                  | 3605                                | 3   | 232  | KSLLREGLESAMLVLKSLLPFSYFV<br>SSMSSGNWSALHNHLGPEDTGTAS<br>PYNRCS*RGRDHLGKRSSTRGTTLG<br>PN  |
| 3343  | 8840                                    | A                  | 3606                                | 303   | 400  |   |
| 3344  | 8841                                    | A                  | 3607                                | 3   | 404  | LRQRLTVTQAGVQ*HRLSSLQPLPP<br>RLKRFSCLSLPSSWDYRRVPPHMA<br>NFLY/FLVETGFHHVGQAGLKLLISS   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | DLPALASQSAGTTGMRHRAQPKSF<br>QLEQKWKTEPHKLIIYVVTLNKRM<br>YKLKTYHIPYYF   |
| 3345  | 8842                                    | A | 3608                                | 2838  | 3122   | FFFFFETKSCSVA\RLECSGTISAHC<br>NLHLPGSSDSPASAS*AAGITGACH<br>HTRLVFLYF**RRGFHHVSQAGLEL<br>LT\*VIHPPQPPKVLGLQA  |
| 3346  | 8843                                    | A | 3609                                |   | 325  | RLFFFFETVSHSVT\RLECT*AILAHC NLCFPRSSNSLASASQVAEITGACY YTQLIFVFSVETGFHHVGQAGLELL T\*VIHPPPPPKVLGLQVSATVPGLII GTFSL  |
| 3347  | 8844                                    | A | 3610                                | 3   | 398  | GSLQPPPPRLK*FSCLSIPSSWDYKR<br>LPPCPANFCIF\TELGFHQVGQAGLE<br>LLTSGDPPASTSQTVGITGISHHAWP<br>PEILSKGTMGKQMVNMLLLASSCR<br>EMGHSAPAHLGQCLPMILPKDLAVI<br>IINPV   |
| 3348  | 8845                                    | A | 3611                                | 3   | 311  | AQTGMQW\DLCSVKPPPPRFERFSC<br>LSLLSC*DYKRTPTCPANFC/DFVVE<br>TEFHHVGQAGLELLTSSDLPASASE<br>NPQITGMNYCIWPEWYYYIHSLTNT<br>IIK   |
| 3349  | 8846                                    | A | 3612                                | 310   | 415  | SQYFGTLRRVDHLRSGVRDQPGQL<br>GKTPS*PQVIHPPQCPKVLGLQYYH<br>FLFFLRRSL/DSVAQAGVQWRDLGS<br>LQRPPPGFTPFSCLSLPSSWDYRRPP<br>PRLANFFVFSVETGF\TVSARMVSIS<br>*PRDPPASASQSAGDTGVSQAPV  |
| 3350  | 8847                                    | A | 3613                                | 1   | 114  | ARAEMLIVQYILPRLTHCAIFTILFIF<br>SLLT*VMLLSS   |
| 3351  | 8848                                    | A | 3614                                | 335   | 477  | TPASLKIPVE**NTLLAKMVSIS*PR<br>DLPASASQSAGITGVSHRARC  |
| 3352  | 8849                                    | A | 3615                                | 135   | 804  | GIDTILTLNQN*SLKTRQ*FTLIIF/IFF<br>FFLRWSLALSPRPDCGLQWRDLGSL<br>QAPLPGFTPFSCLSLPSSWDYRCPPP<br>RPANFFCNFFFSRDGGFTVLARMVS<br>IS*PQ/CDPPTLASQRAG\ITGLSHCT<br>RLFFF*WMESPSVTQAGIQWHDLGS<br>LQPMPPQFR*FSWLSLPSSQDYRCM<br>PPCQANF\CIFSRDEVSPC*PGWSGS<br>PDLVIHLPWPPKVLGLHA |
| 3353  | 8850                                    | A | 3616                                | 3   | 285  | HEIIVLRVRVSPCCPGWSA\TVD*SW<br>FIAASYS*\VKRLSCLSLLRIWGCRQ<br>VPPWLSFKLFWRQGLAVLPKLVSN<br>SWPKMTLLPQPLRLLGLQE  |
| 3354  | 8851                                    | A | 3617                                | 3   | 575  | PSLRHASHEAGWQCPHLGQPLPGY TELRTELPQ*GDGYGRPGVSAASQR R/GLAGQCVEGRDWVEGKAG*CSG GHGGEGKGPLD*GALLPGPQNRS\S GAGDPC*AVESVGCQ*PGECHFQR DPPGSGAAPGAPPPAVP*LHRQPDA AAGGTAGPSLPHLPPPLPGLRVERS KPGGAAEEQGHPHLEHGPGD  |
| 3355  | 8852                                    | A | 3618                                | 3   | 379  | FFETESCSFTQAGVQWHDLGTL*SP<br>PPGFK*FSLSLLSSWDYRRPPPRTA/<br>NYIYIVFLVETGFPYVGQAGQKLLT   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         |  | SCNLPALVSQSARITGVSHCAQLCN<br>FLLTVKHFKPLTLRLEARTPQSFLL   |
| 3356  | 8853                                    | A | 3622                                | 1                       | 214  | ETESRSV/SQAGVQWRDLGSL*PPPP<br>PGFQRFSCLSLPSSWDYRRAPPLPH<br>NF\CIFSRDGVSPCWPGWSQIS  |
| 3357  | 8854                                    | A | 3623                                | 2                       | 309  | WCVFFETETHSAAQAGVQWCNLSS<br>LQPPPPGVKQFSCLSLPSSWDYRCA<br>SPCLASFCIFSRA*GFTMLTCLELLT<br>SGNPPTSASQSAGIQG\VSHHTWPSI<br>F   |
| 3358  | 8855                                    | A | 3624                                | 1                       | 294  | FFFFFLRQGLTLSARLECSGMISAH<br>CSLDLPG\SGDPPTSAS*VAGTTGTC<br>HHAWLIFLFLVETGFHHVAQAGTLS<br>KHRNHIQPVEQVRATCSKDGQ  |
| 3359  | 8856                                    | A | 3625                                | 23                      | 282  | ASTGKPLSPQVQSES/CLALQLP*RS<br>WN*TRVMSTTPWPNFFGIFVEMGF<br>RHIGQAGLELLTSSNPPILASQSAGI<br>TGLSHRVQPTSS   |
| 3360  | 8857                                    | A | 3626                                | 37                      | 289  | QWHDLGSLQPLPPGF\RRLSCLSLTS<br>SWDCR/QPALRPANFFCIFK*RWGF<br>TVLAQDGLDLLTSSDLPASAS*SAGI<br>TGVSHRAWA   |
| 3361  | 8858                                    | A | 3627                                | 70                      | 362  | KLHFKAIEGISSLGEQMKPSMWML<br>LCPQIKIKLTLPIQIKQAKTCRQIPKV<br>QGSQ*KNVGPSSFPVPW/EHGSGMI<br>EAPWALNPYLGLGPVQILETQK   |
| 3362  | 8859                                    | A | 3628                                | 60                      | 303  | KLKNHHHHHQQQQQKQQQQKK<br>QMDPRVSFSFFKKKKSSTPKPSQ*FP<br>*SSRNS/HPR*ISESDTLRPTEAIPIGL<br>KMKLPL  |
| 3363  | 8860                                    | C | 3629                                | 193                     | 285  | MLLVSYPRNSNRCQIQYHEAFCPIIF<br>LRVL*  |
| 3364  | 8861                                    | A | 3630                                | 159                     | 483  | DPTSFGHGYLVFPTPCFKGFYFF*DR<br>VSFCCSGML/IGSLQAQPSGFKPKPS<br>SHLRLLSSEDCRHTPPRLANLFFYFF<br>L*RWDLTMLPRLVSNS*AQVILPSW<br>PPIMLG  |
| 3365  | 8862                                    | A | 3631                                | 6                       | 244  | DRVLLVTQAGVQWHDLGSLKPPPP<br>GFK*VSCLSLPSSWNYRRLPPRP\AN<br>F\*FLVETGFLHVCQAGLKLPTSGDP<br>PASA   |
| 3366  | 8863                                    | A | 3632                                | 2                       | 262  | NDLGSLK\PPPPGFK*VSCLSLP/RVS<br>WNYRRLPPRPSLIFVFLVETGFL\HV<br>CQAGLKLPTSGDPPPSASQSTW\ITG<br>VNHRARPQIGF   |
| 3367  | 8864                                    | A | 3633                                | 1                       | 1149   |  |
| 3368  | 8865                                    | A | 3634                                | 280                     | 602  | TDFFFFFLRWSFTLVAQAGV*LHD PE*LQPPPPGFKRFSCLSLPSSWDYR HPPPWPANF\*FLVETGFHHVGQAG LELLTSGDPPASASQSVGITGVSHR ARPELNF  |
| 3369  | 8866                                    | A | 3635                                | 3                       | 679  | SLHQSGRSNPTCCFPSSKGTGTNGH<br>PTPSQPSPPGTRDGPLFPFPHSASTPP<br>PTGASQPLTGTRGPPSPVEPVSHAC<br>ASL*FSEGLRSEHPAVACGKTLQSP<br>TGSKPEACSGEQGNCVLAEIVVLGT<br>QDPSAH*GGAGARGGGALWVTEG |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | Me<br>tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----------------|-------------------------------------|---|--|---|
|   |   |                |                                     |   |  | VKGPGPVSGQCRKSQPHACGEIPCR<br>APPTMGTSGPL\GLPKLCPHFHCSRG<br>ASPAPSNSPFCFWSPTSGGPNPFPC  |
| 3370  | 8867                                    | A              | 3636                                | 1   | 334  | EMESRSVAQAGVQWHDLGSLQPLP<br>PGFKRFSCLSLPSSWDYMRA/P/PRP<br>G*FFVFLVEMGFHLVGQAGLKLLTS<br>/S/DLPTSASQSAGITGMSHRTRPNSL<br>LVIQSGRFNTKITR  |
| 3371  | 8868                                    | A              | 3637                                | 2   | 309  | FFFFETRSRFVAQAGV*WHAYGSPQ<br>PRPPGPKPSSQLSLPS*DYRHTLLCL<br>ANF\DFLVETGFYHVAQTGLELLSV<br>RDPPALASQSAGIAGVSHRARPGCI<br>F  |
| 3372  | 8869                                    | A              | 3640                                | 19  | 458  | KHLFYSSNLYFRSTFRHTRRRSPCEP<br>SLALR/WCVLEPGSSRV**RLHPNTV<br>GFQDASAKPRERTTSFHAFAFNF*K<br>QYIFQC*LPPLTWLEIFSPFSRETKST<br>KRCRLQDPGPSHFWRVVLCGLLWG<br>QDRAPSWAPLQMQLCHCLYL  |
| 3373  | 8870                                    | A              | 3641                                | 1   | 322  | FLRRSLALVTQARVQWHDPGSLQP<br>SPSGFKRFSCLSPPSTRDYRHPPPRL<br>ANFF/VFFLYL**GFATLAWLVLNSH<br>L/CDPPASASQSARTTGASHHAQPP<br>VSFFKTRI   |
| 3374  | 8871                                    | A              | 3642                                | 333   | 438  |   |
| 3375  | 8872                                    | A              | 3643                                | 391   | 492  |   |
| 3376  | 8873                                    | A              | 3644                                | 598   | 699  |   |
| 3377  | 8874                                    | С              | 3645                                | 176   | 319  | MCSAQPAFSVDIIKSRHLGILGFEYK<br>PRILCQKHMLRLLHSFQNFQR*  |
| 3378  | 8875                                    | A              | 3646                                | 2   | 50   | QLLGTTGMHHYA*LIF  |
| 3379  | 8876                                    | A              | 3647                                | 3147  | 3308   | FFKKNLCASAHYY/TWCVPLPFFFF<br>LRQGL/NSIGQAGVQWCNHSSLQPC<br>PPQDLE  |
| 3380  | 8877                                    | A              | 3648                                | 1554  | 3041   | GTRERRAPDPCAGKCRNHVAGGRL KLSLHLSLPSSWDHRHAPL/PHD*FF KYLRR/RSPCVTQAGLKLLGSSDPPI LASQSIGITDMSHCT/WPSSPTPCHF LRDSFAPSPRPGMQ*CDHSSL*PQTL GLKQFSHQPPFYFFVQMG\FAMLPK LVLNSWPQ/DNPSALAPQSAGIVGM SCCAQPPCFNINSHS*IQE  |
| 3381  | 8878                                    | A              | 3649                                | 280   | 444  |   |
| 3382  | 8879                                    | С              | 3650                                | 135   | 377  | MAGSWGAGQVQWLMSVIPILWEA<br>KMGGSLEPRSLRPAWVTQGDPVSN<br>RLFHSSASVLWLQATLGTIPKSLEYI<br>TLAFRAK*   |
| 3383  | 8880                                    | A              | 3651                                | 1791  | 6596   | CPKDTQILIFQKNNFSIRRFTQHLAD FLKEFCLTFKKKGRSQLL*FCCFVYI IF*KKFVCFCSLLHWCVPLPFFFFLR Q/RSHSIGQAGVQWCNHSSLQPCPP RLK\HPCTSASQVAGTTGMHHYA*L IF*IFETGSPCVTQAGLK/PPGLK*SS HLGLPEYWDYRHEPLHLPSSPTPCH FLRDSFAPSPRPGMQ*CDHSSL*PQT LGLKQFSHQPPFYFFVQMGSCYVA QAGLK/PPGLKQSFCLGPPKCWDCG HELLCPASMF*YQHPHMYTLKTTV |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|------------------------------------|--|
|   |   |   |                                     |   |                                    | TFSTQNYIRYSLNCRKIKTIPKSDCR<br>VDFFLQNT   |
| 3384  | 8881                                    | A | 3652                                | 3   | 332                                | ETESHSVAQDGVQWRHLSSLQPPLL<br>GFK*FSCLSLPSSWDYSCPSPT/P*LI<br>CFFFFFLIEPGFHHFGLAGLELQTSG<br>DLPASAFQDAGITGMSH\*TRPELLS<br>LDHTPFT  |
| 3385  | 8882                                    | A | 3653                                | 3   | 272                                | FETESHS/VSPRLECSGVIFAHCSFCL<br>PGSSDSPASAS*VSGMIGTRNHAQLI<br>FVFLVEVRFHHVGQAGLELLA\*VI<br>HPPQPPKVLGLHV  |
| 3386  | 8883                                    | A | 3654                                | 1   | 272                                | ETGSRSIT\RLECSGAITAHCSLDLPG<br>RSNPPTSAS*/RIAGASGECRHTQL/I*<br>KFIFFVNTGCRYVVQAGLKLLASGA<br>KQSSCLGLSKCWD  |
| 3387  | 8884                                    | A | 3655                                | 249   | 906                                | RIHFPRVSGPSQSNPKFAVASRGFFS<br>LSLSSAQPDPLPPPLGEALALSLHPV<br>PRRSTETVAGDSSELQLGLRSPQQP<br>LAGLAFLARLFLLFPPP*RCKSKPN*<br>NDRRRSSVDSQIHLVGRESAHPLAG<br>LRVCVSLPLLARCFGQVLQGVPGL<br>WIPSPGGS/AGVSGRRREERHMGVV<br>VMRVRVEARVSS*ESKI/SRALR*ST<br>HLGLPKCWDYRREPPCPAH |
| 3388  | 8885                                    | A | 3656                                | 1   | 514                                | FFFFSRSL/NSVIQAGAQWRDLGSLQ<br>P/LLPPGLKQFSCLSLLSSWDYRCPP<br>PRLANFYIF/M*RRGFTILARLVLNS*<br>TQ/CDPPTSASQSAGITGVSHPTQ/LL<br>FSF/CLKESGSSLMVSATLRFHK*RH<br>SGPSRAALSSSP*LEPRKLKFGTASL<br>QNKWAMQQTRQHWAQRGSKPM  |
| 3389  | 8886                                    | A | 3657                                | 2   | 307                                | FFFFFETESYSVTQAGVQWHDLGL<br>LQPLPPGLKQFSSLSLPE*L/DVTGSP<br>PPCPVNFCTFGKGLGFTMVGQAGS<br>GTSDLKVICPPGLPKVLGITGCEPRR<br>L   |
| 3390  | 8887                                    | A | 3658                                | 79  | 91                                 | NTFW*RRGFTVLARMVLIS*PHDLM<br>TC/PASASQSARITGMSHCARLVLYF<br>SRDGVSLCWPGWSQTADLR*STCL<br>GLPKCWDYRYEPPCPASLHHFLIYA<br>TSIIKYL  |
| 3391  | 8888                                    | A | 3659                                | 162   | 493                                | DGSSPPVAQAGVQWRDLGSL\QAPP<br>PGFTPFSCLSLS\RSWDYRRPPPRPA<br>NF/SCIFIVETGFHRVSQDGLDLLTS*<br>S/VPASASQSAGITGVSHRARPRSCIS<br>FDSTVTLAQ   |
| 3392  | 8889                                    | A | 3660                                | 3   | 251                                | GGALRLHQVPPALPLRGAVSGAAA<br>VQGMSDCTPCCEVHLLQD*VPAGE<br>ARVQWHDLGSLQPPPPRFKRFSCLI<br>LPSSWDYRH   |
| 3393  | 8890                                    | A | 3661                                | 3   | 251                                | GGALRLHQVPPALPLRGAVSGAAA<br>VQGMSDCTPCCEVHLLQD*VPAGE<br>ARVQWHDLGSLQPPPPRFKRFSCLI<br>LPSSWDYRH   |
| 3394  | 8891                                    | A | 3662                                | 17  | 287                                | KYHRIQCPNSG\CEAVYSSVSGLKA<br>HLGSCTLGNFVAGKYKCLLCQKEF<br>VSESGVKYHINSVHAEVRLL*SCGP   |

| SEQ ID                  | SEQ ID              | Me  | SEQ ID NO: | Nucleotide                                       | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop                    |
|-------------------------|---------------------|-----|------------|--|-----------------------|--|
| NO: of                  | NO: of              | tho | in USSN    | location of                                      | location of last      | codon; /=possible nucleotide deletion; \=possible          |
| nucleo-tide<br>sequence | peptide<br>sequence | d   | 09/770,160 | first codon<br>for peptide                       | codon for last        | nucleotide insertion)                                      |
| sequence                | sequence            | Į   | j          | sequence   | amino acid of peptide |  |
|                         | <u> </u>            |     |            |  | sequence              |  |
|                         |                     |     |            |  |                       | DM*ATREVDFVPIVMD   |
| 3395                    | 8892                | A   | 3663       | 3  | 567                   | DRKLKYTRPGLPTFSQEVLHKWKT                                   |
| ł                       | ł                   | 1   |            | }  | 1                     | DIKKYHRIQCPNQGCEAVYSSVSGL                                  |
|                         |                     |     | 1          | 1  | 1                     | KAHLGSCTLGNFVAGKYKCLLCQK                                   |
|                         | ļ                   |     | }          | J  | •                     | EFVSESGVKYHINSVHAEDWFVVN                                   |
|                         | İ                   |     | ]          | 1  | ]                     | PTTTKSFEKLMKIKQPAARRRKAEA                                  |
|                         | ļ                   |     | 1          | ļ  |                       | AAQEQKVSKKGGSSLGIELPETEPS                                  |
|                         |                     |     | [          | ĺ  | ĺ                     | LRVGKDQRRNNE\DW*CQPPCKEP/                                  |
| 2206                    | 0002                | +-  | 2664       | <del>                                     </del> | 104                   | GAGASASTVPESKAPKD  |
| 3396                    | 8893                | A   | 3664       | 1  | 184                   | SSRDILLCTDIASRGLDSTGVELVVN                                 |
|                         |                     |     |            | ļ  | 1                     | YDFPPTLQD\ELAARRRSLPGLASS                                  |
| 2207                    | 0004                | +-  | 2665       | <del> </del>                                     | 17/0                  | VKEPLPQAT  |
| 3397                    | 8894                | A   | 3665       | 2  | 1748                  | HEARTKGNMALSAARLRLLFPFVN                                   |
|                         |                     |     |            |  | (                     | SVCFLAP\RRGL\TVRSPDE\PLP\VVR                               |
|                         | Ì                   | 1   |            | 1  | 1                     | IPVASTSGKLEQRQ\SRRRNLPEGRC                                 |
| 1                       |                     |     |            |  |                       | LVRPGPLLVSARRPELN\RPARLTLG<br>RWERAPLASQGWKSRRARRDHFS\I    |
|                         | ]                   | ]   |            | )  | J                     | ERAQQEAPAVRKLSSKGSFADLGA                                   |
|                         |                     | İ   | ĺ          |  |                       | WKPRVLHALQE\AAPEVVQ\PTTVQ                                  |
|                         |                     |     |            |  |                       | SSTIPSLLRGRHVVCAAETGSGKTLS                                 |
|                         |                     | ľ   | ]          |  |                       | YLLPLLQRLLGQPSLDSLPIPAPRGL                                 |
|                         |                     | -   |            |  |                       | VLVPSRELAQQVRAVAQPLGRSLG                                   |
| ļ                       |                     | ļ   | ]          |  |                       | LLVRDLEGGHGMRRIRLQLSRQPSA                                  |
|                         |                     |     |            |  |                       | DVLVATPGALWKALKSRLISLEQLS                                  |
|                         | 1                   |     |            |  |                       | FLVLDEADTLLDESFLELVDYILEK                                  |
| 1                       |                     | ĺ   |            |  |                       | KDLAVFLYHLRLEAEVEVVEMLGP                                   |
| l                       |                     | 1   |            | 1  |                       | HGQPCPQHNSDISAYTYERTLMME                                   |
| }                       |                     | 1   |            | 1  |                       | QRSQMLRQMRLTKTEREREAQLVK                                   |
| ļ                       | Ì                   |     |            |  |                       | DRHSALRLESLYSDEEDESAVGAD                                   |
|                         |                     | 1*  |            |  |                       | KIQMTWTRDKYMTETWDPSHAPD                                    |
| -                       | [                   |     |            |  |                       | NFRELVHIKPDQSNVRRMHTAVKL                                   |
| ĺ                       |                     |     |            |  |                       | NEVIVTRSHDARLVLLNMPGPPRNS                                  |
|                         | 1                   |     |            | 1  |                       | WCTTSSRTEKRQWNCPAVRTEKNA                                   |
| 1                       |                     |     |            | 1  |                       | QTRQTIIAETKTQKKDTEPRIPEADL                                 |
| }                       |                     |     |            |  |                       | AVQYDNHYTNTKYCLCQMLREQL                                    |
|                         |                     |     |            |  |                       | ESPQGRLLHAAQSSREIW   |
| 3398                    | 8895                | A   | 3666       | 1  | 1704                  | MALTRPVRLFSLVTRLLLAPRRGLT                                  |
|                         |                     |     | ı          |  |                       | VRSPDEPLPVVRIPVALQRQLEQRQ                                  |
| ĺ                       | ļ                   | 1 ! |            | ł ,  |                       | SRRRNLPRPVLVRPGPLLVSARRPE                                  |
| •                       |                     |     |            | 1 1  |                       | LNQPARLTLGRWERAPLASQGWKS                                   |
|                         |                     |     |            |  |                       | RRARRDHFSIERAQQEAPAVRKLSS                                  |
|                         |                     |     |            |  |                       | KGSFADLGLEPRVLHALQEAAPEV                                   |
|                         |                     |     |            |  |                       | VQPTTVQSSTIPSLLRGRHVVCAAE                                  |
| }                       | 1                   |     |            |  |                       | TGSGKTLSYLLPLLQRLLG\HPSLDS                                 |
| }                       |                     |     |            |  |                       | LPIPAPRGLVLVPSREFF\QHLRAVA                                 |
|                         |                     |     |            |  |                       | QPLGRSLGLLVRDL\EGGHGMRRIR                                  |
|                         |                     |     |            | ļ  |                       | LQLSRQPSADVLV\ATPG\ALW\KAL<br>KSRLISL\EELSF\LVLDEG\DTLLG*K |
|                         |                     |     |            |  |                       | ASWELV\DYIL\EKSHI\AEGPADLED                                |
|                         |                     |     |            |  |                       | PFNPKAQLVLVGATFPE\GVGQLLN                                  |
|                         |                     |     |            |  |                       | KVASPDAVTTITSSKLHCIMPHVKQ                                  |
|                         |                     | 1 1 |            |  |                       | TFLRLKGADKVAEL\VHIL\KHR\SR                                 |
|                         |                     |     |            |  |                       | AEKGLGPSGTGF\VFCNSSSTVNWL                                  |
|                         |                     |     |            |  |                       | GYILDDHKIQHLRLQGQMPALMRV                                   |
|                         |                     |     |            |  |                       | GIF\QSFQKSSRDILL\CTDIAS\RGL\D                              |
|                         | 1                   |     |            |  |                       | STGV\ELVVNY\DFPPTLARLTFHRA                                 |
|                         |                     |     |            |  |                       | GESGPVWGAEGPG\TVI\SFVTHPW                                  |
|                         |                     |     |            |  |                       | DVNPWFKKD*SLAARPKEEVLPGL                                   |
|                         |                     |     |            | <del></del>                                      |                       |  |

| SEQ ID<br>NO: of        | SEQ ID<br>NO: of    | tho | SEQ ID NO: | location of                            | location of last                                       | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible  |
|-------------------------|---------------------|-----|------------|--|--|--|
| nucleo-tide<br>sequence | peptide<br>sequence | d   | 09/770,160 | first codon<br>for peptide<br>sequence | codon for last<br>amino acid of<br>peptide<br>sequence | nucleotide insertion)  |
|                         |                     |     |            |  |  | AIPR*KKPFAPQSNPDFEQNLIKM   |
| 3399                    | 8896                | A   | 3667       | 2                                      | 222  | RWSLTLFQAGMQW\PNLSSLQPPPP<br>RFKQF*CLSLPSSWDYWYTPPRLAN<br>FCIFSRDGVSPCWSGWSRTPDLR  |
| 3400                    | 8897                | A   | 3668       | 1                                      | 29   | 1 CAL DIEG V SI C IV SG W SKIT DEK   |
| 3401                    | 8898                | A   | 3669       | 2                                      | 206  | VTQAGVQWLALSSLQPLPPG/LK*F<br>YCLSLPSSWEYRHTPPHPTKFCIFFL<br>VEGVSPYWPGWSQTPGLR  |
| 3402                    | 8899                | A   | 3670       | 3                                      | 139  | TSHMWWCRHVVSATREAEVGEPL<br>EPRQSRLQ*AMTAP\CTPAWATK   |
| 3403                    | 8900                | A   | 3671       | 86                                     | 384  | zingeitzg immin territum   |
| 3404                    | 8901                | A   | 3672       | 3                                      | 746  | RQEEGLPPVVDAIDDASVEEDLAVA<br>VAGGRLEEVSFLQPYPARRRRALLR<br>ASGVRRIDREEKRELQALRQSREDC<br>GCHCDRICDPETCSCSLAGIKCQMD<br>HTAFPCGCCREGCENPMGRVE\FNQ<br>ARVQTHFIHTLTRLQLEQEAESF/QG<br>AGGPCPGQPTQPW*GGPGPYFPTGQ<br>APHEQ*AGRQQLQQRHD\YSSTASS<br>SASGTSEAPDCPTHPGLPGPGFQPG<br>VDDDSLARILSFSDSDFGGEEEED |
| 3405                    | 8902                | A   | 3673       | 72                                     | 332  | LPALETPRAQSKCSPPQPSWVSRDY<br>RCVPTHALANF*IFGEMGS/LLCCPR<br>LISNS\WPQGILPPPPPKVLGLQGSYS<br>AKITTGFFLK   |
| 3406                    | 8903                | A   | 3674       | 33                                     | 396  | RVWYLHRVTGRPASCLREVGPGDS<br>LETASLREIWRSRRCRAT/ECSQQRL<br>NHRLARQREHEARLRQQREQNSRY<br>FTDV*HL\RSKQAEWSSKTYYQRSM<br>HAYHREKMKEEKRRSLWARLEKL<br>M  |
| 3407                    | 8904                | A   | 3675       | 217                                    | 935  | QRQREKEDQIRQQWEQNSRYFRMS DICSSKQAEWSSKTSYQRSMHAYQ REKMKEEKRRSLEARREKLRQLMQ EEQDLLARELEELR/REHELAGKKN PGAAREAEISQRRAEETDC*TTFVR TLEKEQPETSRDGAGPSPEACRKLL GNAE/MKKKKQQEASAEQGNKRYE NEYERARREALERMKAEEERRQLE DKLQAEALLQQMEELKLKEVEVGT SPSQP*PPPQLLVSMRWALERLP                                    |
| 3408                    | 8905                | A   | 3676       | 1                                      | 382  | EMEPCFVS*TGV*WHDLSSLQPPLP<br>KFKRFSCLKIPE\SWDYRRTP/PMP/V<br>LTGFHHVDQAGFELLTSSDPPTSAS<br>QSVGITGMGDHTWPTLHTLTKPCE<br>VDENAVMRELKLTGQGPLRKWQF<br>EHLNPA   |
| 3409                    | 8906                | A   | 3677       | 1                                      | 2456   | MPTYPKLEKTDQSTSYTKFNDLSPD<br>SSRERYTSLEIKSVCYTALPEQGQK<br>QLQLWYNCVKTQCKTTQECSLKWI<br>FTMNETSDREDGLPKGHHVTDSEN<br>DEPLNLNASDSESEELHRQKDSDSE<br>SEERAEPPASDSENEDVNQHGSDSE<br>SEETRKLPGSDSENEELLNGHASDS<br>ENEDVGKHPASDSEIEELQKSPASD<br>SETEDALKPQISDSESEEPPRHQASD<br>SENEEPPKPRMSDSESEELPKPQVSD |

| SEQ ID             | SEQ ID         |     | SEQ ID NO:            |                         |                                 | Amino acid sequence ( X=Unknown; *=Stop                                 |
|--------------------|----------------|-----|-----------------------|-------------------------|---------------------------------|---|
| NO: of nucleo-tide | NO: of peptide | d   | in USSN<br>09/770,160 | location of first codon | location of last codon for last | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence           | sequence       |     |                       | for peptide             | amino acid of                   | Indecedial Miser don't  |
|                    | İ              |     | İ                     | sequence                | peptide<br>sequence             |   |
|                    |                | +   |                       |                         | sequence                        | SESEEPPRHQASDSENEELPKPRISD  |
|                    |                | 1   |                       |                         |                                 | SESEDPPRHQASDSENEELPKPRISD  |
|                    |                | 1   |                       |                         | ľ                               | SESEDPPRNQASDSENEELPKPRVS   |
|                    |                | Į.  |                       |                         |                                 | DSESEGPQKGPASDSETEDASRHKQ   |
| i                  |                | 1   |                       |                         |                                 | KPESDDDSDRENKGEDTEMQNDSF  |
| Ì                  |                |     |                       |                         |                                 | HSDSHMDRKKFHSSDSEEEEHKKQ  |
| 1                  |                | 1   |                       |                         | 1                               | KMDSDEDEKEGEEEKVAKRKAAV   |
| }                  |                | 1   | 1                     |                         |                                 | LSDSEDEEKASAKKSRVVSDADDS  |
|                    |                |     |                       | 1                       |                                 | DSDAVSDKSGK\KRRTIASDSEEEA   |
|                    |                | ]   | 1                     | 1                       |                                 | GKELSDKKNEEKDLFGSDSESGNEE   |
|                    |                |     | }                     |                         |                                 | ENLIAD\NLENLVMKRK*NLQVLTK   |
|                    |                | 1   |                       |                         |                                 | KIWEEKGETQVKEAEDSDSDDNIK  |
|                    |                |     | ļ                     | }                       |                                 | RGKHMDFLSDFEMMLQRKKSMSG   |
|                    |                | 1   | )                     | 1                       |                                 | KRRRNRDGGTFISDADDVVSAMIV<br>KMNEAAEDLKETFIDSGVMSAIKE                    |
|                    |                |     |                       |                         |                                 | WLSPLPDRSLPALKIREG\VLKILQE  |
|                    |                | ]   | }                     | ]                       |                                 | LPSVSQETLKHSGIGR\AVMYLYKH   |
|                    |                |     |                       | }                       |                                 | PKESRSNKDMAGKLINEWSRPIFGL   |
|                    |                |     |                       |                         |                                 | TSNYKGMTREEREQRDLEQMPQRR  |
|                    |                |     |                       | }                       |                                 | RMNS/DLVVRHPERDLEKVLTGEEK   |
|                    |                |     |                       |                         |                                 | ALRPGDPGF\VPRARVPMPSNKDYV   |
|                    |                |     | İ                     |                         |                                 | VRPKWNVEMESSRPGILKKGLSRLE   |
| ]                  |                |     |                       |                         |                                 | KHKRRFAEQKRLSKVHRAVKFSIEG   |
|                    |                |     |                       | ļ                       |                                 | NRMPL   |
| 3410               | 8907           | A   | 3678                  | 1                       | 564                             | TLKQVGLTEHVMYLYNDPKESRSN  |
|                    |                | ] . |                       | ]                       |                                 | KDMAGKLINEWSRPIFGLTSNYKG  |
| ]                  |                |     |                       |                         |                                 | MTREEREQRDLEQMPQRRRN\DST<br>  GGQTPRRDLEKVLTGKEKALRPGD                  |
|                    |                |     |                       |                         |                                 | SLNLV/PRARVPMPSNKDYGVRPK  |
| ]                  |                |     |                       | ]                       |                                 | MKCGNGVIQVSGDPPQKGIQSDWI  |
|                    |                |     |                       |                         | •                               | NQMRKFHRY*GKKADLAHAVENP   |
|                    |                |     |                       |                         |                                 | AIEGNKMPIGDPCPGMCPPILLL   |
| 3411               | 8908           | Α   | 3679                  | 63                      | 361                             |   |
| 3412               | 8909           | Α   | 3680                  | 151                     | 384                             |   |
| 3413               | 8910           | В   | 3681                  | 385                     | 479                             | MAGAFRRRFASEVRAQGLESLLEH  |
| ]                  |                |     |                       |                         |                                 | GLRCAGSLRGGQSLPTTMWSPVKV  |
| 2414               | 0011           |     | 2690                  |                         | 600                             | GFE*  |
| 3414               | 8911           | A   | 3682                  | 3                       | 698                             | VFFFFFSGCTRGPLFESDFHRAPHRC  |
| ]                  |                | ]   |                       |                         |                                 | GQGLAAP*AAGAPQPRAPGETRGPE<br>PAPHWRSASGDKPPGQAA\PPALVP                  |
|                    |                |     |                       |                         |                                 | GEGPSWDSDPRGHRCSQATLPRVL  |
| ]                  |                |     |                       |                         |                                 | AGPLQP*LS*LSL*DPPELRSL*PPL*   |
| [                  |                |     |                       |                         |                                 | LRLL**SLEPP*PPLLDSNRFPP*PRSP  |
| [                  |                |     |                       |                         |                                 | PPLENPRPRPRPPRKKPRPPAEPPRY  |
| ]                  |                |     |                       |                         |                                 | PTESVSDDLPAWSTRISVHLQTSHS   |
|                    |                |     |                       |                         | 1                               | WPSWASLASSMFFKVTKPNSRELW  |
|                    |                |     |                       |                         |                                 | SS  |
| 3415               | 8912           | A   | 3683                  | 138                     | 550                             | FCCCFTSSEHSLLAYGSCSPRRTEVL  |
|                    |                |     |                       |                         |                                 | CAQQNPSETQAAPLAS\YMWK*PC  |
|                    |                |     |                       |                         |                                 | NSRLKGPGPGLGEGWPES\RMTSGV   |
|                    |                |     |                       |                         |                                 | TVPGGTSPGTRAGGS\PCPGGLSPEA  |
|                    |                |     |                       |                         |                                 | LRQ*GAGSGPRVSPGA/PGCGAPAA   |
| 3416               | 8913           | A   | 3684                  | 2                       | 555                             | YGAASPCPQRCGAL<br>FFFFFLGAHVALYSNPTFTGLHIVV                             |
| 3410               | 0713           | ^1  | JU04                  | 4                       | ردر                             | GKDWPPP*AAGAPQPRAPGETRGPE   |
|                    |                |     |                       |                         | l                               | PAPHWRSASGDKPPGASGCLQLLF  |
|                    |                |     |                       |                         |                                 | QGEVPPGDS*PQRSSLALRPPFPRVL  |
|                    |                |     |                       |                         |                                 | GPGPFQP\AKAKQRYSQRPPQGSQL   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|-------------------------|--|---|
|   |   |     |                                     |                         |  | APP/GPPRKQPQPLRKVSG*SGGCDL<br>RLRHRPACPGRVCTLAQLEPATRM<br>GWSYVGQCGL  |
| 3417  | 8914                                    | В   | 3685                                | 95                      | 371  | MASDEGKLFVGGLSFDTNEQSLEQ<br>VFSKYGQISEVVVVKDRETQRSRGF<br>GFVTFENIDDAKDAMMAMNGKSV<br>DGRQIRVDQAGKSSDNPIPWX*  |
| 3418  | 8915                                    | A   | 3686                                | 314                     | 1055   | SKCFHLHQVWKQKGEEYRVTGYG GWSWISKTHVYRFVPKLHGNTNVN YRKSLEGTKNNMDENMDESDKRK CSRSPKKIKIEPDSEKDEVKGSDAA KGADQNEMDISKITEKKDQDVKEL LDSDSDKPCKERTNGSRR*HENRVT CKLSGEFSSRCGQC**GFSSKD*LQK ENKIIQTRWTS*KEN*TVYTGRKTA TRKNQVGGWN*GYRKD\STNSSKN LSESPVITKAKEGCQSDSDETRTEPK CK |
| 3419  | 8916                                    | A   | 3687                                | 11                      | 345  | DSLTVAQSGVQWHNLISLQPLPPGV<br>K*LFCLSLPSS*DYRRAPPHPANFS\F<br>LVEMGFYHVGQAGLELLISSDLTSL<br>ASQSAGITSVSHWAWPENVYLNLQ<br>QTEKSLMVSG   |
| 3420  | 8917                                    | A   | 3688                                | 1                       | 521  | NPTKSCMLEG*NPHVHCK\REGAQA ITGMPI*KATKYLKYFLLQKLCVPF QS/YESGVGRCTQDRHWGWTHHQ WPRKGTEICLQVQSYAELKGIDVDS LVIEHIQ/V/NKAPIMYHLTYRTHGQ MNP/YHKLPCHIQMMLSEKKHLVP KAEKEDARKKKIPQKKHKLKRQTN SAKRKCK  |
| 3421  | 8918                                    | A   | 3689                                | 1                       | 281  | ETGSHSDAQAGVQWHDLGPMQPLP<br>PGFKRFSHLSLLSSWDYRHAP/PRPG<br>LFL*RWGFHQVGQVDLELLNSSDPP<br>ASTSQSAGITSASHRAWPN  |
| 3422  | 8919                                    | A   | 3690                                | 3                       | 314  | HAEHEITELTATFTKFDRDGNRILDE<br>KEQEKMRQDLEEER\LTRRVLQLET<br>VLERVVAQIDALSSKLEMLEKKGV<br>SLSLFTSFNIRAFKSLFSHYSSVTPIN<br>YL  |
| 3423  | 8920                                    | A   | 3691                                | 61                      | 400  | LVTGIWSATCLWVLLLLLFEKGCPS VQPRLQCS\NVITACCSLNL\RGSND PPTSASRVPGDHRCCHYTWANFLIF LWEMRSHCVGFRLGLGTPVLKLQT ILQPQPPKVLGLQA  |
| 3424  | 8921                                    | A   | 3692                                | 33                      | 436  | REQEL/CKGKQKDGTSFGEYGGWY KACKVDSPTVTTTLKNLGALYRRQ GKFEAAETLEEAAMRSRKQGLDNV HKQRVAEVLNDPENMEKRRSRESL NVDVVKYESGPDGGEEGVSGRASF CGKRQQQQWPGRRHR  |
| 3425  | 8922                                    | A   | 3693                                | 37                      | 355  | NSEYGGWYKACKVDSPTVTTTL\K<br>NLGALYRRQGKFEAAETLEEAAMR<br>SRKQGLDNVHKQRVAEVLNDPEN<br>MEKRRSRESLNVDVVKYESGPDGG<br>EEDGTGSLKRS  |
| 3426  | 8923                                    | A   | 3694                                | 229                     | 2000   | QRERARPSGARRMYDTMSTMVYIK  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|---|--|
|   |   |   |                                     |                         |   | EDKLEKLTQDEIISKTKQVIQGLEAL KNEHNSILQSLLETLKCLKKDDESN LVEEKSNMIRKSLEMLELGLSEAQV MMALSNHLNAVESEKQKLRAQVR RLCQENQWLRDELANTQQKLQKSE QSVAQLEEEKKHLEFMNQLKKYDD DISPSEDKDTDSTKEPLDDLFPNDED DPGQGIQQQHSSAAAAAQQGGYEI PARLRTLHNLVIQYASQGRYEVAVP LCKQALEDLEKTSGHDHPDVATML NILALVYRDQNKYKDAANLLNDAL AIREKTLGKDHPAVAATLNNLAVL YGKRGKYKEAEPLCKRALEIREKV LGKDHPDVAKQLNNLALLCQNQG KYEEVEYYYQ\RFLEIFQTKLGPDDP NVGKTKNNLASCYLKQGKFKQAET LYKEILTRAHEREFGSVDDE\NKPI\ WMHAEEREECKGQQKDGTSF\GEY GG\WYK\ACTVDSPTVTTTLINLGAL YRRQGKFEAAETLEEAAMRSRKQG LDNVHKQ\RVAEVLN*PLRTLEKPQ EPVESL\NV\DVVKYESGPDG\GEEV SMSVEWNGGVSGRASFCGKRQQQ QWPGRRHR |
| 3427  | 8924                                    | A | 3695                                | 1                       | 314   | KVDSPTVTTTLKNLGALYRRQGKF EAAETLE\EAAMRSRKQGLDNFTKQ RLPEVLNDP\ENMEKRRSRESL\NVD VV\KYESGPDGGEEVSMSVKWNGM RKMKLGAG  |
| 3428  | 8925                                    | A | 3696                                | 2                       | 450   | VNKAGGLIYQLDSYAP/RAEAEKTF<br>SYPLDLLLKLHDERVLVAFGQRDGI<br>RVGHAVLAINGMDVNGRYTADGK<br>EVLEYLGNPANYPVSIRFGRPRLTS<br>NEKLMLASMFHS\IKFVVLADP\RQ<br>AGIDSLLRKIYEIYSDFALKNPFYSL<br>EMP   |
| 3429  | 8926                                    | A | 3697                                | 2                       | 823   | FGTRGKAAMAIFSVYVVNKAGGLI YQLDSYAPRAEAEKTFSYPLDLLLK LHDERVLVAFGQRDGIRVGHAVLA INGMDVNGRYTADGKEVLEYLGNP ANYPVSIRFGRPRL\TSNEKLMLAS MFHSLFAIG\SQLSPE\QGSSG\IGCLE TDPFQFH\CSRTLTGIKF\VVLADPR\ QAGIDSLLRKDFMEILLQTLPLKNPI PIPLEMP\IRCEPL*PQNPEA*SLEVA\ EKAG\TFGPRVHRLNPVMGPPQNPE SSLQQEYCLLTLPVEIPAALVSAP   |
| 3430  | 8927                                    | Α | 3698                                | 165                     | 354   | ENFGGKITNFAKLFGYILPYSHYFW<br>CLEKNRNR/SLTLLPRLVSNSWAQA<br>FLLLWPPKVLRLQA   |
| 3431  | 8928                                    | A | 3699                                | 3                       | 166   | SETGFCHVAQAGLELLVSRSPPASV<br>SQS\TGISHQARPSISYFYDHSAPITH<br>TDH  |
| 3432  | 8929                                    | A | 3700                                | 1                       | 421   | ETKSHSVTKTEVEWRDPSSLQPLSP<br>GFKQFSCRSLPN\SWDYR/PSPANFV<br>FLVETGFYLVGQAGLELLTSNDPPA<br>SASQSAGITGVSHCAQPRITNSLTTA<br>SFIQPRKHSEFPVMTCPPSSNATESK   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
| 3433  | 8930                                    | A | 3701                                | 2   | 205  | VGGRGPHGAIARLM APVTSW/IQPKVGSCPFSESTKTISLY ISSEQQFHLPRPSESDDFIEDTADML\ VSFSGYSSAPKNQEQ   |
| 3434  | 8931                                    | A | 3702                                | 2   | 205  | APVTSW/IQPKVGSCPFSESTKTISLY<br>ISSEQQFHLPRPSESDDFIEDTADML\<br>VSFSGYSSAPKNQEQ  |
| 3435  | 8932                                    | C | 3703                                | 282   | 445  | MISAHCNLLPPEAGELLEPGGRRFS<br>EPLHSSLMTEQDSVSKINKNNKTSIS<br>NPE*  |
| 3436  | 8933                                    | A | 3704                                | 170   | 607  | WPSG*FQR*SMRLLKYKIHLNVSRR PQLAPGKELYFSF*LLFYFYFYFIIIIII FEMESHSVT\RLECSGTISAHCNLHL PGSSDSP\ASASPVAGTLIDACHHTW \LIFYNF*VEMGFHHVGQAGLKLLT\ *VTHPPRPSKVLGLQA  |
| 3437  | 8934                                    | A | 3705                                | 3   | 231  | FETESLFPRLECSGTISAHCNLRLSG<br>SSNFWLIFCI\LVEMGFHHVGQTSLE<br>LLTSSHPPTSAFQSARITGVSHRTW  |
| 3438  | 8935                                    | A | 3706                                | 4   | 144  |  |
| 3439  | 8936                                    | A | 3707                                | 333   | 416  | FTGLPCLFSPQNNVSLLQSCID\LFK<br>NN   |
| 3440  | 8937                                    | A | 3708                                |   | 1219   | MAAVPELLQQQEEDRSKLRSVSVD LNVDPSLQIDIPDALSERDKVKFTV HTKTTLPTFQSPEFSVTRQHEDFVW LHDTLIETTDYAGLIIPPAPTKPDFD GPREKMQKLGEGEGSMTKEEFAK MKQELEAEYLAVFKKTVSSHEVFL QRLSSHPVLSKDRNFHVFLEYDQDL SVRRKNTKEMFGGFFKSVVKSADE VLFTGVKEVDDFFEQEKNFLINYYN RIKDSCVKADKMTRSHKNVADDYI HTAACLHSLALEEPTVIIKYLLKVA ELFEKLRKVEGRVSSDEDLKLTELL RYY\MLN\IEAAKDLLYRRTQS/ALI DYENSNKALDKARLKSKDVKLAEA H\QQECC\QKFEQLS\ESAKEELINFK \RKRVA\AFRKNLIEMSELEIKHARN NVSLLQSCIDLFEE |
| 3441  | 8938                                    | A | 3709                                | 527   | 724  | TMKIGLGFSLVSINIFSFPVELINFKR<br>KRVAAFRKN\LIEMSELEIKHA\RNN<br>VSLLQSCIDLVKNN  |
| 3442  | 8939                                    | A | 3710                                | 1   | 1220   | QEGGSAGSAGSGADGTGLRQSLAG HVGRPGRGQWGQRGSGDLPGHRPP PARSEHRCVAEG/NLSLYVFGGYNP DYDESGGPDNEDYPLFRELWRYHF ATGVW\HQMGTDG\YMPR\ELASMS LVLHGNNLLVFGDTGIPFGESNGND VHVCNVKYKRWALLSCRGKKPSRI YGQAMAIINGSLYVFGGTTGYIYST DLHKLDLNTREWTQLKPNNLSCDL PEERYRHEIAHDGQRIYILGDGTSW TAYSLNKIHAYNLET\NAWEEIATK PHEKIGFPAARRCHSCVQIKNDVFIC GGYNGEVILGDIWKLNLQTFQWVK LPATMPEPVYFHCAAVTTA\GCMYI HG\GVVNIH\ENKRTG\SLFKIW\LVV   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | PSLLELAW\EKLLGAFP\NLANL\SRT<br>QLLH\LGFTQGLIERLK   |
| 3443  | 8940                                    | A | 3711                                | 2   | 266  | FLMESRSVTRLECSSTITAHCNLCLP<br>VSSDSAVSASQVAGTTGMRHHAQL<br>IFVFLVETGFHHVGQDGLHLL/NIVI<br>HLPRPPKVLGLQA  |
| 3444  | 8941                                    | A | 3712                                | 1   | 453  | FKRAMDLVQEEFLQRLDFSQHSWL<br>PARALVEEALAQRFQVDPSGEIVEL<br>AKGACPWKEHLYHLESGLSPPVAIF<br>FVIYTDQ/RWTVANIAGCPLPEPWR<br>GLRDEALDQVSGIPGCIFVHASGFIG<br>GHRTREGALSMARATLAQRSFLPQI<br>S  |
| 3445  | 8942                                    | A | 3713                                | 20  | 891  | RWNSRYDHHQRSFTETMSSLSPGK PWQTKLSSAGLIYLHFGAQ\VLAQL LGTSEEDSMVGTLYDKMYENFVEE VDAV\DNGISQWAEGEPRYALTTTL SARVARLNPTW\NHPDQDTEAGFK RAMDLVQKEVSCRD*IFYQHSWLP ARGLGGKSHLPQRIPRWNPSGK\IVE LAKRCHVPWKEHLLPPGNLGLSPS KWPIFFVIYTD/SRL/EQWRIQCVAQ/ VSPTHSQSRAA\LPEPWRGLRGTRP WT*FSGIPGCIFVHASGFI/SAVNATR EGALSMARATLAQRLIPPTNLLV  |
| 3446  | 8943                                    | A | 3714                                | 176   | 450  |  |
| 3447 3448                                   | 8944<br>8945                            | A | 3715<br>3716                        | 1   | 1354   | AAARRATCLGCRSCSGATARRASS WRTAPRVHSVAWKL\DGRRLASGS FDKTASRLLAWRRTRFGQKKTIIGG HGG*C/VTSFCWHPSNPEPICYGV/Y GDKTIRIWECEDYKNALPLVN\IKGE NINICWSPDWQTIAVGNKDDVVTFI *CQDTPFQSRRAVQVPRSTKSPWNH DHNMFLLT\NGNGCINILSYPELKA\ VQSINAHP\SN\CICNQV*PHGESTLP QASCKMLLVSLWDVG*VSVCFGAF SRLDWAC*EPFSFSHDGKMLASASE DHFIDIAEVETGDKLW\EVQCESPT\ SQVAWAPQKASAGHLPR LWDV/EELVCVGAFRLDWP/VRTSV |
|   |   |   |                                     |   | 1  | SAHDGKMLASASEDHFIDIAEVKTG<br>DKLWEVQCESPTFTVAWHPKRPLL<br>AFACDDQKTANMTSSREAGTVKPV<br>GAS   |
| 3450  | 8947                                    | A | 3718                                | 2   | 276  | RSTFALVAPAGVQWHDNRSLQPLL<br>PRFKQLSCLSLLSSWDYRCPPPSPA<br>NF/SLFLVETGFRHAGQAGLQLLTS<br>GDLPTSASKSAGITGMGLQ  |
| 3451  | 8948                                    | A | 3719                                | 3   | 613  | GLRALRRGQGLPGL*CCSRPQPSPR<br>AQGHPSMGGPMQRVTPPRGMASV<br>GPQSYGGGMRPPPNSLAGPGLPAM<br>NMGPGVRGPWASPSGNSIPYSSSSP<br>GSYTGPPGGGGPPGTPIMPSPGDST<br>NSSENMYTIMNPIGQGAGRANFPLG<br>PGPEGPMAAMSAMEPHHVNGSLGS<br>GDMDGLPKSSPGAVAGLSNAPGTP  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|----------------------------|--|--|
| 3452  | 8949                                    | В | 3720                                | 134                        | 471  | RDDGEMAA  MYAKGGKGSAVPSDSQAREKLALY VYEYLLHIGAQKSAQTFLSEIRWEK NIMPSPGDSTNSSENMYTIMNPIGQ GAGRANFPLGPGPEGPMAAMSAME PHHVNGSLGSGDMDG*   |
| 3453  | 8950                                    | В | 3721                                | 223                        | 692  | MEPSPRAQGHPSMGGXMQRVTPPR<br>GMASVGPQSYGGGMRPPPNSLAGP<br>GLPAMNMGPGVRGPWASPSGNSIP<br>YSSSSPGSYTGPPGGGGPPGTPIMPS<br>PGDSTNSSENMYTIMNPIGQGAGRA<br>NFPLGPGPEGPMAAMSAMEPHHVN<br>GSLGSGDMDG*   |
| 3454  | 8951                                    | В | 3722                                | 228                        | 292  | XLARDDHERVMGRQPRASLRA*   |
| 3455  | 8952                                    | A |                                     |                            | 1753   | MYAKGGKGSAVPSDSQARENLSAF QAATELTSLDRLALYVYEYLLHIGA QKSAQTFLSEIRWEKNITLGEPPGFL HSWWWYGLGCCGVFWDLYCAAP DRREACEHSGEAKAFQDYETPERP AHRHGNAGRAGSSSGMIDVGGSSD PQILRPTTPVCSLTNASSLSHGAGHL QRGGGTPQSAAAAPSPVMGSMAPG DTMAAGSMAAGFFQGPPGSQPSPH NPNAPMMGPHGQPFMSPRFPGGPR PTLRD\GSQPPAGPPWVPSPSSPG\A MEPSPRAQGHPEHGRPNARGVTPP RG/MGPAWGPRAYGGGMRPPPNSL TRPRACLPMNMGPRKFVGPWAQPP VEYSIP\YSSSSPGSYTG\PPGGGGPP GTP\IMPSPGDS\TNSSENMYTIMNPI GQGADRANFP\LGPGPEGPMAAY\G \GMEPHHVNGSLGSGDMDG\LPREF PQAPVAGLSNAPG\TPRDDGEMAA AGTFHAPSSQSE\NYSP\GMTMSRV NWAAAPGALCGPRLLPRRPCLRAK GLKVTPSGTLDSLANQGLPMLGGP TRKTLTILLKTQGPRETFFSVWTLPA ICILVPERKALWGGPSSPGRQGGGA |
| 3456  | 8953                                    | A | 3725                                | 65                         | 210  | ATRAGLIFDDSFEHDVWQDASSFRL<br>IFIVDGWHPELTPQQRRS\LPAI   |
| 3457  | 8954                                    | A | 3726                                | 2548                       | 3800   | NSLILLFFFFRQRSLTLECSGVISAH HNLHLPSSSNS/P/ASAS*VAGITGM HRHAWPICIFLVETGFRHVGQAGLE LLTSGDPPAPTSQSM*ATTSGLILLL SKILFPFHSTKVFK*SCPS*KILKEEN CSVINEWFNSESSYTSKEKNNLVPN AC*EI\TM*VATNCDFT/SLL*RSENY PKLFHNNETTSQKIHLKIKISRPATS GQW\ILFSLVWWRARKG*GILMIHN GILY*TIC*IKLHRLP*GMDYPNQPD/ MKSGWDKRMSHTL*F*GKEIVFDF QNQQNKLSTLYLSVQE**HEEFFFR DLKYNKPGSTIKSLVSF/HSLTLFFFF FFEARSHSASQAGVQWGNIGSLQPA PPGLKRSSYLSLLSSWDYRRVPPHP ANFCIFCR/GWGFGVSPCCPGSSGTP VLKWRAHLSLPNC  |

| SEQ ID      | SEQ ID       | Me            | SEQ ID NO:   | Nucleotide  | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop                 |
|-------------|--------------|---------------|--------------|-------------|---------------------|---|
| NO: of      | NO: of       | tho           | in USSN      | location of | location of last    | codon; /=possible nucleotide deletion; \=possible       |
| nucleo-tide | peptide      | đ             | 09/770,160   | first codon | codon for last      | nucleotide insertion)                                   |
| sequence    | sequence     | 1             | ĺ            | for peptide | amino acid of       |   |
| L           |              |               |              | sequence    | peptide<br>sequence |   |
| 3458        | 8955         | A             | 3727         | 2           | 217                 | SSPSPPHPPASPPSSPSP\PASPPPPSLP                           |
|             | ļ            |               | [            |             | 1                   | LPSPDFPPLSPCSSLSPFSSFSPPPSPP                            |
|             |              |               | İ            |             | <b>.</b>            | SPPFSRGPSPSDNFH   |
| 3459        | 8956         | Α             | 3728         | 25          | 396                 | ISGRSTFSLFSRQGLSALSPRLE\CSV                             |
|             |              |               |              | 1           | 1                   | AISAHCNLRLPGSSN\GTTGA*HHTR                              |
| ł           |              | 1             |              | 1           | ł                   | LILYF/LAEMGFHHVGQAGFEVLTS                               |
|             |              |               |              |             |                     | SNPPASASTSARITGMSNRT\GHLFN                              |
| 2460        | 00.55        | <del></del>   | 2522         |             |                     | FHP*MCYKYRCGSLAGRGGSRW                                  |
| 3460        | 8957         | A             | 3729         | 80          | 460                 | YISLNVTTHLIFFFFFLRQGL\CSVTQ                             |
|             |              |               |              |             |                     | AGV\QWCNLGSLQPLPPRFK\NWDY                               |
|             |              |               |              |             | •                   | RCVTPHLANFVFLVEMGF/LPASAS                               |
|             |              |               |              |             | }                   | QSAGITGVSHCTQLGVFICICYGSSH                              |
|             |              | 1             | ,            |             |                     | GVRQSWHQFCSSKLLVKSGRVGVG<br>LLG                         |
| 3461        | 8958         | $\frac{1}{A}$ | 3730         | 1           | 316                 | FFFFETESHSIVQAGVQWRDLSSL                                |
|             | 5,50         |               | 5,50         | 1           | , 510               | QPPPPRFKRFSSLSLPSSWDYRHVPP                              |
| 1           |              |               |              |             |                     | RPA\NFAFLVEMGFHHVGQAGLELL                               |
|             |              |               | ı            |             |                     | TPGDPPSSASQSAGMTGVTHCAWP                                |
|             |              |               |              |             |                     | RCLMF   |
| 3462        | 8959         | A             | 3731         | 3           | 1717                | RPQTLKGHQEKIRQRQSILPPPQGPA                              |
|             |              |               |              |             |                     | PIP\SSTAAGIPRRPRIAWARR/WPLS                             |
|             |              |               |              |             |                     | EPGFRRRESQEEPRAVLAQKIEKET                               |
|             | i            |               |              | 1           | l                   | QILNCALDDIEWFVARLQKAAEAF                                |
|             |              | 1 1           |              | !           |                     | KQLNQRKKGKKKGKKAPAEGVLT                                 |
|             |              |               |              |             |                     | LRARPP\PEGEFI\DCFQKIKLAINLL                             |
|             |              |               |              |             |                     | AKLQKHIQNPQRR\DVVHFLFGPLD                               |
|             |              |               |              |             |                     | LIVNTCSGPDIARSVSCPLFSRDAVD                              |
|             |              |               |              |             |                     | FLRGHLVPKEMSLWESLGESWMRP                                |
|             |              | 1 1           |              | 1           |                     | RSEWPREPQVPLYVPKFHSGWEPPV DVLQEAPWEVEGLASAPIEEVSPVS     |
|             |              | 1 1           |              |             |                     | RQSIRNSQKH/RPHFRAHPPGGCPY                               |
|             | •            |               |              | ,           |                     | HQSAPHILTRGYQPTPAMAKYVKIL                               |
|             |              | 1 1           |              |             |                     | YDFTARNANELSVLKDEVLEVLED                                |
|             |              |               |              | (           |                     | GRQWWKLRSRSGQAGYVP\GNILG                                |
|             |              |               |              | <u> </u>    |                     | EARPEDAGAPFEQAGQKYLGTPQP                                |
|             |              |               |              |             |                     | DPQATPKLPGGT/IDELMQHMDEVN                               |
|             |              |               |              |             |                     | DELIRKI\TTSRAQPQRHFRVERSQP                              |
|             |              |               |              | ]           |                     | VSQPLTYESG\PDEVRA\FLEAKAFS                              |
| [           |              |               |              |             |                     | PRIVENLGILTGPQLFSLNKEELKKV                              |
|             |              |               |              |             |                     | CGEEGFRVYSQLTMQK\AFLEKQQS                               |
|             |              |               |              | (           |                     | GSELEELMNKFHSMNQRRGEDQLG                                |
|             |              |               |              | ]           |                     | PAALGWGLRRGSPPTMHGVLFLYV                                |
| 3463        | 8060         |               | 2722         | 1           | 224                 | YVFCIK  |
| 3464        | 8960<br>8961 | A             | 3732<br>3733 | 1           | 324                 | MDVI I ETVELODI GOPPIEGI NETT                           |
| J704        | 0701         | ^4            | 3133         | 1           | 581                 | MDKLLETYSLQRLSQEEIESLNRTI<br>MSEKTKSVINTIPTKKSPGPDRLTAN |
|             |              |               |              |             |                     | MSFKTKSVINTIPTKKSPGPDRLTAN                              |
|             |              |               |              |             |                     | NPGVGQCCTSSYANRRPCFSSLVVD                               |
|             |              |               |              |             |                     | ETYVPPAFSDDKFIFHKDLCQAQGV                               |
|             |              | ] ]           |              | ]           |                     | ALQTMKQEFLINLVKQKPQITEEQL                               |
|             |              |               |              |             |                     | EAVIADFSGLLEKCCQGQ\NQEVCF                               |
|             |              |               | !            |             |                     | AEEGQKLISKTRAALGV                                       |
| 3465        | 8962         | A             | 3734         | 39          | 1935                | LATMKWVESIFLIFLLNFTESRTLHR                              |
|             |              |               | •            |             | ·= =='              | NEYGIASILDSYQCTAEISLADLATIF                             |
| ,           |              |               |              | ]           | ļ                   | FAQFVQEATYKEVSKMVKDALTAI                                |
|             |              |               |              |             | ļ                   | EKPTGDEQSSGCLENQLPAFLEELC                               |
|             |              |               |              | 1           | ĺ                   | HEKEILEKYGHSDCCSQSEEGRHNC                               |
|             |              |               |              |             |                     | FLAHKKPTPASIPLFQVPEPVTSCEA                              |
|             |              |               |              |             |                     |   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|-------------|--|---|
|   |   |     |                                     |             | sequence   | YEEDRETFMNKFIYEIARRHPFLYA PTILLWAARYDKIIPSCCKAENAVE CFQTKAATVTKELRESSLLNQHAC AVMKNFGTRTFQAITVTKLSQKFTK VNFTEIQKLVLDVAHVHEHCCRGD VLDCLQDGEKIMSYICSQQDTLSNK ITECCKLTTLERGQCIIHAENDEKPE GLSPNLNRFLGDRDFNQFSSGEKNI FLASFVHEYSRRHPQLAVSVILRVA KGYQELLEKCFQTENPLECQDKGE EELQKYIRE\GQPWAKGSSGFSKK* GEYYLQTGSSLSLQQ*RPPQLTSSEL MAITRKMAATAATCCQLSEDKLLA\ CGEGAADIII\GHLCIRHEMTPGKPL VFGQVPAPPSICPNRRPHASSTWVV DGNIWSPPCISLMTKFHFSP*RDPGG PSLQGW*ALAKPMKAKRFPSLTLV KAKGPQIPGGNNSEAVIARFPQAWL EK\CCQ/GPQEQEVCFAQEGTK\LISK TRAALGV |
| 3466  | 8963                                    | A   | 3735                                | 95          | 272  | RALQPDTTWE*GSQRRPWLPQVTN<br>KPVL*SKTSKS   |
| 3467  | 8964                                    | В   | 3736                                | 344         | 1420   | MLLKTVLLLGHVAQVLMLDNGLL QTPPMGWLAWERFRCNINCDEDPK NCISEQLFMEMADRMAQDGWRDM GYTYLNIDDCWIGGRDASGRLMPD PKRFPHGIPFLADYVHSLGLKLGIY ADMGNFTCMGYPGTTLDKVVQDA QTFAEWKVDMLKLDGCFSTPEEAA QGYPKMAAGLNATGRPIAFSCSWP AYEGGLPPRVNYSLQADICNLWRN YDDIQDSWRSVLSILNWFVEHQDIL QPVAGPGHWNDPDMLLIGNFGLSL EQSRAQMALWTVLAAPLLMSTDLR TISAQNMDILQNPLMIKINQDPLGIQ GRRIHKGSWMPKGSCVPGCLRDPG TQDSQGKISHRSVHAASVQQG*   |
| 3468  | 8965                                    | В   | 3737                                | 49          | 2119   | MALWTVLAAPLLMSTDLRTISAQN<br>MDILQNPLMIKINQDPLGIQGRRIHK<br>EKSLIEVYMRPLSNKASALVFFSCR<br>TELCLIATTSCLGQLNFTGSVIYEAQ<br>DVLLS*   |
| 3469  | 8966                                    | A   | 3738                                | 139         | 536  | QSLGFIPPFRKRQRISISYTFYFETGS YSVAQAGVQWHNLGSLQPRPPGFK QSSCLSPPGSWDHWRAPPHQAN\FA LLVETGSPHAAQASLKLLSSSDPSA LASQSTGITGVSHHGQPYISHTLIIIFI GKFY  |
| 3470  | 8967                                    | A   | 3739                                | 1           | 213  | QFSCLSLPSSRDYRHEQP/PLIFVFLV<br>ETGFYHVGQAGLELLTSGDPPALAS<br>QSAEITGVSPRTRPNNLKS   |
| 3471  | 8968                                    | В   | 3740                                | 75          | 729  | MEGTAGGERPSVVNGDSGKSGGVG<br>DPREPLSCLQEGSGCHPTTESFEKSV<br>REDASPLPHVCCCKQDALILQRGLH<br>HEDGSQHIGLLHPGDRGPDHEYLLV<br>EEAERAMSEREARPNEESVQRNRLI<br>CRTNPYRIFEYLPLSLEEAFFLVYAL<br>GCLSIYYEKEPLTIVKLWKAFTVVQ  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | PTFRTTYMAYHYFRSKGWVPKVGL<br>KYGTDLLLYRKGPPFYHAX*   |
| 3472  | 8969                                    | A | 3741                                | +   | 2649   | AT OTDEED THE OTT THE  |
| 3473  | 8970                                    | A | 3742                                | 41  | 656  | PVPRPCCGLRARSWPSSPRAARAAL PHGESALSRLLRALLAARASLDLCL FAFSSPQLGRAVQLLHQRGVRVRV VTDCDYMALNGSQIGLLRKAGIQV RHDQDPGYMHHKFAI\VDRRVLITG SLNWTTQAIQNNRENVLITEDDEYV RLFLEEFERIWEQFNPTKYTFFPPKK SHGSCAPPVSRAGGRLLSWHRTCG  |
|   |   |   | ĺ                                   | 1   | 1  | TSSESQT  |
| 3474  | 8971                                    | A | 3743                                | 3   | 267  | FNMESQSLASLKCSGAVSAHCNLCF<br>LGSSNSPASASRVSGITGVLYHTWLI<br>FVFLVQTGFHHVGQAGLELL/NLVI<br>HPPRPPKVLGLQA  |
| 3475  | 8972                                    | A | 3744                                | 2   | 430  | FFFETGGAFVTQAGVQWPNLSSLQP<br>SPPGFKPSSHLSLPSTWDYRYTPPCP<br>ASFCIF\TDTGFCHVDQAGLELLASC<br>NLPASASRSAGITGVSHHACPFLLFS<br>FFKSGITSPNYPISHHEIIESNVAPVF<br>LFEDSTAIYVYYF  |
| 3476  | 8973                                    | A | 3745                                | 2   | 316  | EFLFFETEFCSVT\RLECSGAISAHCK<br>LCLLGSRHSPASASRVARTTGTRHH<br>AQRIF\VFSVETGFHRVS\RDGLDLL/<br>NLVIHPPQPPKVLGIRGREPPCPACF<br>FAF   |
| 3477  | 8974                                    | A | 3746                                | 1   | 1053   |  |
| 3478  | 8975                                    | A | 3747                                | 1   | 3011   | SLQRLPGLMHNLQTFLLDGNFLQSL PAELENMKQLSYLGLSFNEFTDIPE VLEKLTAVDKLCMSGNCVETLRLQ ALRKMPHIKHVDLRLNVIRKLIADE VDFLQHVTQLDLRDNKLGDLDAMI FNNIEVLHCERNQLVTLDICGYFLK ALYASSNELVQLDVYPVPNYLSYM DVSRNRL\ENVPEW\VCESRKLGSF GILGHN\QIC\ELPARLFCN\SSLRKLL GQGHN\QLARLPERLERTSVEVLDV QHNQLLELPPNLLMKADSLRFLNAS ANKLESLPPATLSEETNSILQELYLT NNSLTDKCVPLLTGHPHLKILHMA YNRLQSFPASKMAKLEELEEIDLSG NKLKAIPTTIMNCRRMHTVIAHSNC HRGPFPEVM\QLP\EIKCVD\LSCNE\ LSEVTLP\ENLPSPNCRSLDLTGNPR PCPLITKPLELLNNIRCFKID\QPSTG DG\SGAPAVW\SHG\YTEA\SGVKNK LCV\VALSVNNFCDNREALYGVFD GDRNVEVPYLLQCTMSDILAEELQ KKTKNEEEYMVNTFIVMQRKLGTA GQKLGGAAVLCHIKHDPVDPGGSF TLTSANVGKCQTVLCRNGKPLPLSR SYIMSCEEELKRIKQHKAIITEDGKV NGVTESTRILGYTFLHPSVVPRPHV QSVLLTPQDEFFILGSKGLWDSLSV EEAVEAVRNVPDALAAAKKLCTLA QSYGCHDSISAVVVQLSVTEDSFCC CELSAGGAVPPPSPGIFPPSVNMVIK |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | DRPSDGLGVPSSSSGMAS\EISSELST<br>SEMSSEVGSTASDEPPPG\ALSENSP\<br>AYPSEQRCMLHPIWLSNSFQRQLSS<br>ATFSSAFSDNGLDSDDEEPIEGVFTN<br>GRRVEVEVDIHCSRATEKEKQQHL<br>LQVPSEASDEGIVISANEDEPGLPRK<br>ADFSAVGTIGRRRANGSVAPQERSH<br>NVIEVATDAPLRKPGGYFAAPAQPD<br>PDDQFIIPPELEEEVKEIMKHHQEQQ<br>QQQQPPPPPQLQPQLPRHYQLDQLP<br>DYYDTPL   |
| 3479  | 8976                                    | A | 3748                                | 1                       | 246  | LPTLECSGMISAHCNLRLPGSSDSP\ ASASQVAGITSAHHYAWLVFVFSV EMGFHHVGQGWSRSLDLVIRPPQPP KMLGLQA   |
| 3480  | 8977                                    | A | 3749                                | 153                     | 527  | LLVFYLPTPSLKGGLRQLDMSLLCQ<br>LYSLYESIQEYKGACQAASSPNWTY<br>ALENGFFDEEEEYFPEQNSLHDRRD<br>RGPPRDLSLP\APPSPAATGFWSPSR<br>GSWEGCDCWEALPTGHAVIICCFS   |
| 3481  | 8978                                    | A | 3750                                | 2                       | 377  | IPAASTFFCFLRQSLTLWPHAGVQW<br>CGLSSLHPPPPGFMLFSCLSLPSSWD<br>YRRPPPRPAKFSVFLVETGFHRVSQ<br>DGLDLMTS\DPPALASQSAGITGVS<br>HCTRPKEAYFYFLALDPRCKDGVR   |
| 3482  | 8979                                    | A | 3751                                | 2                       | 294  | LFLHADRLEYSGMTISHLQPQTPGA<br>QGDPLTSSLPREVGLQ/CVCHHTQL<br>FFF/CIFVETESHHLA\RAGLKLLGSS<br>DPTASPSQSDGITGMSHHSCPSTF   |
| 3483  | 8980                                    | A | 3752                                | 80                      | 267  | RQGLTILPRLVLNSC/RLKLSSHLSLP<br>KYWDYRQEPPCLAISIIFFKKSLIYY<br>LNLAILYFKCK  |
| 3484  | 8981                                    | A | 3753                                | 1                       | 972  |   |
| 3485  | 8982                                    | A | 3754                                | 1                       | 283  | PKPQEIELPEAKNR\PWIFNKILGTTV<br>KLMELKPNTCYCLSVRAANTAGVG<br>KWCKPYKVSPGKRGALGVERSPKP<br>REPGLWRLGTPLCPHDSSG  |
| 3486  | 8983                                    | В | 3755                                | 346                     | 472  | XRNMNILQYCPSSDMWTLFETCDV<br>HIRKQQMVSVEETIYIVGG*  |
| 3487  | 8984                                    | A | 3756                                | I                       | 1346   | MSAEEMVQIRLEDRCYPVSKRKLIE QSDYFRALYRSGMREALSQEAGGP EVQQLRGLSAPGLRLVLDFINAGGA REGWLLGPRGEKGGGVDEDEEMD EVSLLSELVEAASFLQVTSLLQLLLS QVRLNNCLEMYRLAQVYGLPDLQE ACLRFMVVHFHEVLCKPQFHLLGS PPQAPGDVSLKQRLREARMTGTPV LVALGDFLGGPLAPHPYQGEPPSML RYEEMTERWFPLANNLPPDLVNVR GYGSAILDNYLFIVGGYRITSQEISA AHFLQGP/RTNEWLQVASMNQKRS NFKLVAVNSKLYAIGGQAVSNVEC YNPEQDAWNF\VAPLPNPLAEFSAC ECKGKIYVIGGYSTRDRNMNILQYC PSSDMWTLFETCDVHIRKQQMVSV EETIYIVGGCLHE\RGPNRRSSQSED MLTVQSYNTVTRQWLYLKENTSKS |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  GLNFDLCAP   |
|---|---|---|-------------------------------------|---|------------------------------------|---|
| 3488  | 8985                                    | A | 3757                                | 3   | 358                                | TNSMPPMMSMSYRICAMLKGE/DV<br>QALRRAHQRNVKHMRQLLMDRGL<br>PCHPLPPANINPIRVR/DPHPCPIALS<br>HPIYSWSLTLPNKPTSVAVFNYLLS<br>CLTIPFIASFVSLFEKLSAILD   |
| 3489  | 8986                                    | A | 3758                                | 1   | 164                                | GSTTPAMEFASLFKKILLIDCRD/RG<br>LALLPRLVLSSWPQVIFLPWPPKFL<br>GLRT   |
| 3490  | 8987                                    | A | 3759                                | 3   | 280                                | FFFETESHSVA\RLEYRGTILAHCILC<br>RQGSSNSPASDPQVAGTTGTRHRA<br>QLTFV\FLVQMGFHHFGQAGLELPN<br>LGIHPTSASPKCWDLPA   |
| 3491  | 8988                                    | A | 3760                                | 3   | 516                                | AQHQPMNIFPYPVGVHAPLMNIQR NPFNIHPQLPLHLHTGVPLMQVATP TSVSQGLPPPPPPPPPSQQVNYIASQ PRWKRNCTKLQ\IQEKAAQEVK\LAI KPFYQNKDITKEEYKEIVRKAVDKV CHSKSGEVNSTKVGNL\VKAYVDQ YEYSRKGSQRKLWEGPVSTGKN  |
| 3492  | 8989                                    | A | 3761                                | 173   | 411                                |   |
| 3493  | 8990                                    | A |                                     | 438   | 789                                | LTWSTPVLPAPTAAP\GKYGNGFQG<br>PSSGNTSSSSHSQRPLMAAVKLAES<br>KVSVAVEASADSSKTDKKLQIQEK<br>AAQEVKLAIKPFYQNKDITKEEYKE<br>IVRKAVDKCVLLECSIQKM  |
| 3494  | 8991                                    | A | 3763                                | 1097  | 4669                               | ILLGTSCKGYALAHTQEGEEKKQTS GTSNTRGSRRKPAMTTPTRRSTRNT RAETASQSQRSPISDNSGCDAPGNS NPSLSVPSSAESEKQTRQAPKRKSV RRGRKPPLLKKKLRSSVAAPEKSSS NDSVDEETAESDTSPVLEKEHQPDV DSSNICTVQTHVENQSANCLKSCNE QIEESEKHTANYDTEERVGSSSSESC AQDLPVLVGEEGEVKKLENTGIEA NVLCLESEISENILEKGGDPLEKQDQ ISGLSQSEVKTDVCTVHLPNDFPTC LTSESKVYQPVSCPLSDLSENVESV VNEEKITESSLVEITEHKDFTLKTEE LIESPKLESSEGEIIQTVDRQSVKSPE VQLLGHVETEDVEIIATCDTFGNED FNNIQDSENNLLKNNLLNTKLEKSL EEKNESLTEHPRSTELPKTHIEQIQK HFSEDNNEMIPMECDSFCSDQNESE VEPSVNADLKQMNENSVTHCSENN MPSSDLADEKVETVSQPSESPKDTI DKTKKPRTRRSRFHSPSTTWSPNKD TPQEKKRPQSPSPRRETGKESRKSQ SPSPKNESARGRKKSRSQSPKKDIA RERRQSQSRSPKRDTTRESRRSESLS PRRETSRENKRSQPRVKDSSPGEKS RSQSRERESDRDGQRRERERRTRK WSRSRSHSRSPSRCRTKSKSSSFGRI DRDSYSPRWKGRWANDGWRCPRG NDRYRKNDPEKQNENTRKEKNDIH LDADDPNSADKHRNDCPNWITEKI NSGPDPRTRNPEKLKESHWEENRN ENSGNSWNKNFGSGWVSNRGRGR |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | GNRGRGTYRSSFAYKDQNENRWQ NRKPLSGNSNSSGSESFKFVEQQSY KRKSEQEFSFDTPADRSGWTSASSW AVRKTLPADVQNYYSRRGRNSSGP QSGWMKQEEETSGQDSSLKDQTNQ QVDGSQLPINMMQPQMNVMQQQM NAQHQPMNIFPYPVGVHAPLMNIQ RNPFNIHPQLPLHLHTGVPLMQVAT PTSVSQGLPPPPPPPPSQQVNYIAS QPDGKQLQGIPSSSHVSNNMSTPVL PAPTAAPGNTGMVQGPSSGNTSSSS HSKASNAACKNWQKGKVSVAVEA SA\YSSKTDKKFAKFQEKAAQVVKI WAI\KPFYQNKDITKEEYKEIVRKA VDKVCHSKSGEVNSTKA\ANLVKA YVDKYKYSRKGSLKKTLEEPRVTE KDLG               |
| 3495  | 8992                                    | A | 3764                                | 108   | 253  |   |
| 3496  | 8993                                    | A | 3765                                | 2   | 283  | RRLFFFFETESRSV\SRLECSG\ISAHC<br>NLH/LPGSSNSPGSASRVAGITGACH<br>HAQLIF\VFLVETGFHHVGQAGLEL<br>L/NLMICPPQPPKVLGLQA  |
| 3497  | 8994                                    | A | 3766                                | 1   | 290  | RSTFFFFFLERVYCSVT\RLECSGT\IS<br>AHCNLRLPGSSGSHASVSQVAGITG<br>AHHHTQPIFVFLVETGFHHIGQAGL<br>ELL/NLMIHPPRPPKVLGLQV   |
| 3498  | 8995                                    | A | 3767                                | 234   | 1449   | EPGTHDPHLFLQGLLFWQAGGGEG GDGTGPAGGRQICVPPAALAHVRV PGEFLAQVAAAA*AIHDEQRPGKLH HPPG/ELMQRGVASESYMIVAPPMP SSWSSSGTNGPPSPTNLT*PIVHFIFS APTP/TKKTTTNTAMKTATHIPDVQ SAFCSPHSGTQRGDGLGKRKRGRG RTWERRRVSIETSTCFRPGCERLG AAAGANLSQLASSQRPLRERWVLY TIIMAAAGAPDGMEEPGMDTEAET VATEAPARPVNCLEAEAAAGAAAE DSGAARGSLQPAPAQPPGDPAAQA SVSNGEDAGGGAGRELVDLKIIWN KTKHDVKFPLDSTGSELKQKIHSIT GIPPDESPRRGGPAGPYQQSQRLEL YAQATEALLKTGAAYPCFCSPQRLE LLKKEALRNHQTPR |
| 3499  | 8996                                    | A | 3768                                | 1 1106  | 8157   |   |
| 3500  | 8997                                    | A | 3769                                | 1126  | 1355   |   |
| 3501  | 8998                                    | A | 3770                                |   | 1611   | MGSRCLNPPPPAHSDTTGKDSFGNI RGAETGQGASACSVTSARVTCGAG SEPHSHRNPGISAQVGLAPSYGAAR GRRRPLALQQSPQERRHVGWNSTR GLLPASLPGTASSQSASATASAALP LKVTGPLARNPTPPWTAAAALATR GQRPEKGLFPGPAPFSLGKRKRGRG RTWERRRVSIETSTCFRPGCERLG AAAGANLSQLASSQRPLRERWVLY TIIMAAAGAPDGMEEPGMDTEAET VATEAPARPVNCLEAEAAAGAAAE DSGAARGSLQPAPAQPPGDPAAQA SVSNGEDAGGGAGRELVDLKIIWN  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|-------------------------|--|--|
|   |   |     |                                     |                         |  | KTKHDVKFPLDSTGSELKQKIHSIT<br>GLPPAMQKVMYKGLVPEDKTLREI<br>KVTSGAKIMVVGSTINDVLAVNTP<br>KDAAQQDAKAEENKKEPLCRQKQ<br>HRKVLDKGKPEDVMPSVKGAQERL<br>PTVPLSGMYNKSGGKVRLTFKLEQ<br>DQLWIGTKNGTEKLPMGSIK\NVV\S<br>DPI\EGHEDYHNDGRFQLAPTEA\SY<br>YWVYWVPTQYVDAIK\DTVLGKW<br>QYF   |
| 3502  | 8999                                    | A   | 3771                                | 482                     | 631  | AGGWGPQAPDTPWVGPAGQAGRL<br>HPLRSTKRS/MSVPATRTTVPLTVM<br>Q*RRVCRWCWGPLGHWEAHGFLV<br>SGDVNHFGGPAALLL   |
| 3503  | 9000                                    | A   | 3772                                | 1                       | 1579   |  |
| 3504  | 9001                                    | A   | 3773                                | 3                       | 486  | DRYMLTRDYLTVKVWDLNMEARP IETYQVHDYLRSKLCSLYENDCIFD KFECAWNGSDSVIMTGAYNNFFRM FDRNTKRDVTL\EASRESSKPRAVL K\PRRVCVGG\KRRRDDISVGQLGTF TKKIL\HTAW\HPAE\NIHLPFAATNN LLHLSRGKVNSDMH   |
| 3505  | 9002                                    | A   | 3774                                | 72                      | 1317   | KLLPAPRQPPRPTNGSPRDPTPAQV* VEAPAGSSQ*TAP/ARRPLRAARTLP AAEAAGLTLRGCFHGDRGRACAAL RRWPWRQLRGWGFEVPAPPLLRTP AELVG/RSPEPRCPGKVSMAEFLTEF LEIPPFNKQYTESQLRAGAGYILEDF NEAQVDVLESQFSQLLHQINSTRDF ESIRLAHDHFLSNLLAQSFILLKPSP VEEKSEPQDFQEADSWGDTKRTPG VGKEDAAEETVKPGPEEGTLEKEE KVPPPRSPQAQEAPVNIDEGLTGCTI QLLPAQDKAIVFEIMEAGEPTGPILG AEALPGGLRTLPQEPGKPQKDEVLR YPDRSLSPEDAESLSVLSVPSPDTAN QEPTPKSPCGLTEQYLHKDRWPEVS PEDTQSLSLSEESPSKETSLDVSSKQ LSPKALAPFQLGN |
| 3506  | 9003                                    | A   | 3775                                | 1                       | 350  | FGTRKPGAVGAGEFVSPCESGDNT<br>GEPSALEEQRGPLPLNKTLFLGYAF<br>LLTMATTSDKLASRSKLPDGPTGSS<br>EEEEEFLEI\PPFNKQYQESQLRAGA<br>GYILKEFKEAQVRSFFV  |
| 3507  | 9004                                    | A   | 3776                                | 3                       | 318  | RRGLTLSSRLEYSGIIKTHWNLHLL<br>GSSNPPTSASQVAGTTGTCHHAQLN<br>FF/CLTFLVATRSHDIAQAGLELLDS<br>SHPPASASHSAGTTGVNHHAWPAV<br>ALLWIN   |
| 3508  | 9005                                    | A   | 3777                                | 4                       | 378  | ARNHHDLCFKKAILFFEMESCSVSQ<br>AGVQWRVFGSLQAPPPGFLPFS/CY<br>RCQPPSPANFFLYFLVETGFLF**RQ<br>GFTVLDRMVSIS*PRDPPALASQSA<br>GITGVSPRTRQEGHS*R*EENGIG  |
| 3509  | 9006                                    | A   | 3778                                | 19                      | 418  | VEMGFCQADQAGLELLTSGDPPAS<br>VSQSTGITVLSLSFFFETESRSVAQA<br>GVQWRDLGSLQRPPPGFTPFSCLSL<br>PSSWDYRRPPPRLANFFVFSVETGF   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | HRVSQDGLDLLT/S/GDPPASASQSA<br>GDTGVSQAPV  |
| 3510  | 9007                                    | A | 3779                                | 3   | 331  | CFIFYFILFYFETESRSVAQAGVQWR<br>HLDSLQAPPPGFTPFSCLSLPSSWDY<br>RRP/PPRPANFFVLLVQTGFHRVSQD<br>GLDLLT/S/GDPLASASQSAGITGLSH<br>RARPAQVS   |
| 3511  | 9008                                    | A | 3780                                | 659   | 1092   | AYNIFQFANRTNTGENLPKTLVIKYI<br>SSTFRSFFFFFFFFLRQSRSVAQAGVQ<br>WRNLGSLQPPPPGFTPFSCLSLPSSW<br>DYGRPPPRPANF/SVFLVETGFHRVS<br>QDGLDLLT/S/GDPPTSASQSAGITG<br>VSHCARPHSVLIKEITQT     |
| 3512  | 9009                                    | A | 3781                                | 8   | 295  | GRVSLRHQAGVQWRSLGSLQAPPP<br>RFTPFSCLSLLRSWDHRRPPPRPANL<br>LYFLVETGFHRVRQDGLDLLT/S/GD<br>PPALASQSAGITGVSHRAHPTY  |
| 3513  | 9010                                    | A | 3782                                | 1474  | 1870   | SARGITGVSHCTRPFSFFFFFFFFETE<br>SHSIAQAGVQWRYLGSLQPLPPGFK<br>QFACLSLSSSWDCRHAPPRPANFL\F<br>LVEMGFHHL*LELLISSDPPASAFKS<br>ARITGVSHRAWPIRFFLLKNIFKFLN<br>FC                      |
| 3514  | 9011                                    | A | 3783                                | 60  | 560  | SDNYEKSHNIQEMTGLQSTLLVNN RVQLNFKWELNFFLSFLKQSSTLVA QAGVQWHDLGSLQPPPPGVKRFSC LSLPSSWDYRHVPPCLANFVFLFFL VETGFLHVGQAGPELLTSGGPPASA SQSAGITSVTH\RPLPEDSAFYQCRL NLWQRSPLECRCSLVLKT |
| 3515  | 9012                                    | A | 3784                                | 3   | 230  | FFFKTESRSVTRLECSGAVLAHCNL<br>QLPGSSNSPASASRVAGITRHVPPH\<br>RLIFVFLVETGFHHVGQDGLDLLTL  |
| 3516  | 9013                                    | A | 3785                                | 3   | 4117   | KEN VIEVEIGITATV GQDGEDEETE   |
| 3517  | 9014                                    | A | 3786                                | 1   | 457  | FPVRNLDLSTYCIGQKEEQLPSYEL YADINHYGGMIGGHYTACAPLPND RSSQRNDVGWRLFDDSTLTTRDQS QAVTRYAYVLFYRRNSPVERP\PK AGHSEHHPDLGPAAEAAASQ/ATRP WPGPRGG/APRGQPLNASPPLWIGQ TPPLKQT              |
| 3518  | 9015                                    | A | 3787                                | 1   | 298  | NNQESCSVTEAGVQWHDLGSLQPP<br>PSGFKQFS/CAQLLSSQDHRHMPPCP<br>ANFYVFLLIAEMGFYHVSQAGLELL<br>TSSDLPALASQSAGIIGVSHRAWAK  |
| 3519  | 9016                                    | A | 3788                                | 3   | 286  | FFFFLFETQSH\SHIRLECSGV\ISDYC<br>NLCLPSSSDSLVLASGV\AGTMGVR<br>HNARLIFVFLVKMRFHHVGPRLGP<br>QIPWTGIWIPSHFGPPQSA  |
| 3520  | 9017                                    | A | 3789                                | 1   | 1422   |   |
| 3521  | 9018                                    | A | 3790                                | 353   | 470  | IPGVSLYSLFSLL\QNIPQSTEILKKL<br>MTTNEIQSNIYT   |
| 3522<br>3523                                | 9019                                    | A | 3791<br>3792                        | 1328  | 1615   | VSLFHAGVQWCDLSSLQPPPPGFKR<br>FS/RLNLLSSWDYRRPLPHPSTFCKF\<br>VEMGFHHIGQAGLKLLTSGDPPASA<br>SQSARITGVSHRARNCFYVT<br>CQPGFVMKGPP\HRVQCQALNKWE                                     |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  TELPSCSR\VCLPEA   |
|---|---|---|-------------------------------------|-------------|--|--|
| 2524  | 0001                                    | - | 2704                                | 1040        | 20.62  | TELPSCSRIVCLPEA  |
| 3524  | 9021                                    | A | 3794                                | 1940        | 2062   | <u>                                     </u>   |
| 3525  | 9022                                    | A | 3795                                | 785         | 892  |  |
| 3526  | 9023                                    | A | 3796                                | 1           | 2745   |  |
| 3527  | 9024                                    | A | 3797                                | 1           | 3297   |  |
| 3528  | 9025                                    | Α | 3798                                | _1          | 2202   |  |
| 3529  | 9026                                    | A | 3799                                | 1           | 2868   |  |
| 3530  | 9027                                    | A | 3800                                | 1           | 3237   |  |
| 3531  | 9028                                    | A | 3801                                | 1           | 2001   |  |
| 3532  | 9029                                    | A | 3802                                | 1           | 2982   |  |
| 3533  | 9030                                    | A | 3803                                | 1169        | 3269   | VHCRFWILALCQMSRLQKSPLLFNI VLEVLAKAIKQEKEIKGIQLGKEEV KLSLFADDMIVYLENPTVSAQNLLK LMSNFSKVSGYKINVQKSQAFLYT NNRQTESQIMSGLPFTITSKRITYLGI QLTRDVKDLFKENYKPLLKEIKEDT NKWKNIPCSWVGGRINLVKMAILP KVIYRFNAIPIKLPMTFFTELEKTTL KFIWNQKRALIAKSSLSQKNKTGGI TLPDFKLYYKATVTKTSWYWYQN RDIDQWNRTEPSEIMPHIYNYLIFDK PDKNKQWGKDSLFNKWCWENWL AICRKLKLDPFLTPYTKINSRWIKDL HVRPKTIKTLEENLGNTIQDIGMGK DFMSKTPKAMATKAKIDKWDLIKL KSFCTAKETTIRVNRQPTEWEKIFA TYSSDKGLISRIYNELKQIYKKKTN NPIKKWAKDMNRHFSEEDIYAAKK HMKKCSSSLAIREMQIKTTMRYHLT PVRMVIIKKSGNNRCWRGCGEIGTL LHCWWDCKLVQPLWKSVWQFLRD LELEIPFDPAIPLLGIYPEDYKPCCYK DTCTRMFIAALFTIAKTWNQPKCPT MIDGIKKMWHIYTMEYYAAIKKDE FMSF\AGTWMKLETIILRKLSQGQK TKHRMYSLIGGNLTMRTFGHSAGS HHTPGPIMRCGAGGGIALGEIPNVN DELMGTANQHGTCIPMQQNCTLCT CTLKLKV |
| 3534  | 9031                                    | A | 3804                                | 2821        | 5793   |  |
| 3535  | 9032                                    | A | 3805                                | 2           | 256  | KRSLSLPSRLECSGVILAHCKLRLLG<br>SRHSPPSDSGAAGTAGARHHARLFF<br>LYFLVFHRVCLDGLDLL/NLVIHLPR<br>SPKVWGLQA   |
| 3536  | 9033                                    | A | 3806                                | 1           | 2406   |  |
| 3537  | 9034                                    | A | 3807                                | 139         | 6503   |  |
| 3538  | 9035                                    | A | 3808                                | 1           | 3204   |  |
| 3539  | 9036                                    | A | 3809                                | 77          | 277  | PHPTPCSCPFPWSASSPLT*TH\QALT<br>EEDEW*QAKNSGQAAQGQTPALPL<br>GNLGQVTAPLCPRFIC  |
| 3540  | 9037                                    | В | 3810                                | 21          | 219  | MMPRSSRTKSCRSSCVAWSSCMKE<br>NKELRAEAERLGHELQQAGLKTKE<br>AEQTCRHLTAQVRSLGGTX*   |
| 3541  | 9038                                    | A | 3811                                | 1           | 6359   | MTLHATRGAALLSWVNSLHVADP<br>VEAVLQLQDCSIFIKIIDRIHGTEEGQ<br>QILKQPVSERLDFVCSFLQKNRKHP<br>SSPECLVSAQKVLEGSELELAKMT  |

| SEQ ID      | SEQ ID   | Me  | SEQ ID NO: | Nucleotide              | Nucleotide            | Amino acid sequence (X=Unknown; *=Stop            |
|-------------|----------|-----|------------|-------------------------|-----------------------|---|
| NO: of      | NO: of   | tho | in USSN    | location of             | location of last      | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide  | d   | 09/770,160 | first codon             | codon for last        | nucleotide insertion)                             |
| sequence    | sequence | ļ   |            | for peptide<br>sequence | amino acid of peptide |   |
|             |          |     |            | sequence                | sequence              | İ   |
|             |          | 1   |            |                         |                       | MLLLYHSTMSSKSPRDWEQFEYKI                          |
|             | 1        |     |            | }                       | 1                     | QAELAVILKFVLDHEDGLNLNEDLE                         |
|             | }        |     |            |                         |                       | NFLQKAPVPSTCSSTFPEELSPPSHQ                        |
|             | ĺ        |     |            | 1                       | 1                     | AKREIRFLELQKVASSSSGNNFLSGS                        |
|             |          |     |            | ł                       | <u> </u>              | PASPMGDILQTPQFQMRRLKKQLA                          |
|             |          |     |            | į                       |                       | DERSNRDELELELAENRKLLTEKDA                         |
|             |          |     |            | ļ                       |                       | QIAMMQQRIDRLALLNEKQAASPL                          |
|             |          |     |            |                         |                       | EPKELEELRDKNESLTMRLHETLKQ                         |
|             |          |     |            |                         | }                     | CQDLKTEKSQMDRKINQLSEENGD                          |
|             | 1        | 1   |            |                         |                       | LSFKLREFASHLQQLQDALNELTEE                         |
|             | ļ        |     |            | ļ                       |                       | HSKATQEWLEKQAQLEKELSAALQ                          |
|             | 1        |     |            | Î                       |                       | DKKCLEEKNEILQGKLSQLEEHLSQ                         |
|             | ĺ        |     |            | ĺ                       |                       | LQDNPPQEKGEVLGDVLQLETLKQ                          |
|             | İ        |     |            | 1                       |                       | EAATLAANNTQLQARVEMLETERG                          |
|             | [        |     |            | 1                       |                       | QQEAKLLAERGHFEEEKQQLSSLIT                         |
|             |          |     |            | ,                       |                       | DLQSSISNLSQAKEELEQASQAHGA                         |
|             |          |     |            |                         |                       | RLTAQVASLTSELTTLNATIQQQDQ                         |
|             |          |     |            |                         | <b>!</b>              | ELAGLKQQAKEKQAQLAQTLQQQE                          |
|             | ]        |     |            |                         |                       | QASQGLRHQVEQLSSSLKQKEQQL                          |
|             |          |     |            | ļ .                     |                       | KEVAEKQEATRQDHAQQLATAAEE                          |
|             |          |     |            |                         |                       | REASLRERDAALKQLEALEKEKAA                          |
|             |          |     |            | [                       | _                     | KLEILQQQLQVANEARDSAQTSVT                          |
|             |          | 1 1 |            | 1                       |                       | QAQREKAELSRKVEELQACVETAR                          |
|             |          |     |            |                         |                       | QEQHEAQAQVAELELQLRSEQQKA                          |
|             |          |     |            | ]                       |                       | TEKERVAQEKDQLQEQLQALKESL                          |
|             |          |     |            |                         |                       | KVTKGSLEEEKRRAADALEEQQRCI                         |
|             |          | ii  |            | [                       |                       | SELKAETRSLVEQHKRERKELEEER                         |
|             |          |     |            | }                       |                       | AGRKGLEARLQQLGEAHQAETEVL                          |
|             | !        |     |            | ļ j                     |                       | RRELAEAMAAQHTAESECEQLVKE                          |
|             |          |     |            |                         |                       | VAAWRERYEDSQQEEAQYGAMFQ                           |
| ĺ           |          |     |            | 1                       |                       | EQLMTLKEECEKARQELQEAKEKV                          |
| Ì           |          | 1 1 |            | ļ l                     |                       | AGIESHSELQISRQQNELAELHANL                         |
|             |          | 1 1 |            |                         |                       | ARALQQVQEKEVRAQKLADDLSTL                          |
|             |          |     |            |                         |                       | QEKMAATSKEVARLETLVRKAGEQ                          |
| [           |          |     |            |                         |                       | QETASRELVKEPARAGDRQPEWLE                          |
|             |          |     |            | ľ                       | •                     | EQQGRQFCSTQAALQAMEREAEQ                           |
|             |          | 1 1 |            | :                       |                       | MGNELERLRAALMESQGQQQEERG                          |
|             |          |     |            | j                       |                       | QQEREVARLTQERGRAQADLALEK                          |
| j           |          |     |            | ļ                       |                       | AARAELEMRLQNALNEQRVEFATL                          |
|             |          | 1 1 |            | ľ                       |                       | QEALAHALTEKEGKDQELAKLRGL                          |
|             |          | 1 1 |            | l                       | i                     | EAAQIKELEELRQTVKQLKEQLAK                          |
| ļ           |          | 1 1 |            |                         | ,                     | KEKEHASGSGAQSEAAGRTEPTGP                          |
|             |          |     |            |                         |                       | KLEALRAEVSKLEQQCQKQQEQAD                          |
|             |          | 1   | ĺ          | [                       | ſ                     | SLERSLEAERASRAERDSALETLQG                         |
|             |          | 1 1 | l          |                         | ł                     | QLEEKAQELGHSQSALASAQRELA                          |
|             |          |     |            |                         |                       | AFRTKVQDHSKAEDEWKAQVARG                           |
|             |          |     | İ          | ļ                       |                       | RQEAERKNSLISSLEEEVSILNRQVL                        |
|             |          |     |            | ĺ                       |                       | EKEGESKELKRLVMAESEKSQKLEE                         |
| ľ           |          | 1 1 |            | ĺ                       |                       | RLRLL\QAETASNSARAAERSSALR                         |
| ł           |          |     | ł          | }                       |                       | EEVQSLREEAEKQRVASENLRQELT                         |
| }           |          |     |            | j                       |                       | SQAERAEELGQELKAWQEKFFQKE                          |
|             |          |     | Í          |                         |                       | QALSTLQLEHTSTQALVSELLSA\KH                        |
|             |          |     | 1          |                         | ľ                     | LCQQLQAEQAAAEKRHREELEHSK                          |
| ļ           |          |     | l          |                         | }                     | QAAGGLRAELLRAQRELGELIPLRQ                         |
|             |          |     | 1          |                         | ļ                     | KVAEQERTAQQLRAEKASYAEQLS                          |
|             |          |     |            |                         |                       | MLKKAHGLLAEENRWLGERANLG                           |
|             |          |     | ſ          | 1                       | 1                     | RQFLEVELDQAREKYVQELAAVRA                          |
| )           |          | 1   | i          | - 1                     | ł                     | DADTRLAEVQREAQSTARELEVMT                          |

| SEQ ID             | SEQ ID         |  |                       | Nucleotide              | 2                   | Amino acid sequence ( X=Unknown; *=Stop   |
|--------------------|----------------|--|-----------------------|-------------------------|---------------------|---|
| NO: of nucleo-tide | NO: of peptide | d  | in USSN<br>09/770,160 | location of first codon | location of last    | codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
| sequence           | sequence       |  |                       |                         | amino acid of       | ,   |
|                    |                |  |                       | sequence                | peptide<br>sequence |   |
|                    | <u> </u>       | <del>                                     </del> |                       | <del> </del>            | Sequence            | AKYEGAKVKVLEERQRFQEERQKL  |
|                    |                |  |                       |                         |                     | TAQVEQLEVFQREQTKQVEELSKK  |
|                    |                |  |                       |                         | }                   | LADSDQASKVQQQKLKAVQAQGG   |
|                    |                |  |                       |                         |                     | ESQQEAQRLQAQLNELQAQLSQKE  |
| 1                  |                |  |                       | }                       | }                   | QAAEHYKLQMEKAKTHYDAKKQQ   |
| 1                  |                |  |                       |                         |                     | NQELQEQLRSLEQLQKENKELRAE  |
|                    | }              |  |                       | 1                       |                     | AERLGHELQQAGLKTKE\AEQ\TCR<br>HLYLPRLRSLE\AQ\VAHARPSSFRD   |
|                    |                |  |                       |                         |                     | LGKFQVAT\DALKSREPQAKPQLDL   |
|                    |                |  | }                     |                         |                     | SIDSLDLSCEEGTPLSITSKLPRTQPD   |
|                    |                | 1  |                       |                         |                     | GTSVPGEPASPISQRLPPKVESLESL  |
| 1                  |                |  |                       | 1                       |                     | YFTPIPARSQAPLESSLDSLGDVFQD  |
|                    |                |  |                       |                         |                     | SGRKTRSARRRTTQIINITMTKKLD   |
| 1                  |                |  |                       | 1                       |                     | VEEPDSANSSFYSTRSAPASQASLR   |
| 1                  |                |  |                       |                         |                     | ATSSTQSLARLGSPDYGNSALLSLP   |
| 1                  |                |  |                       |                         |                     | GYRPTTRSSARRSQAGVSSGAPPGR   |
| 1                  |                |  |                       |                         |                     | NSFYMGTCQDEPEQLDDWNRIAEL QQRNRVCPPHLKTCYPLESRPSLSL  |
|                    |                |  |                       |                         |                     | GTITDEEMKTGDPQETLRRASMQPI   |
|                    |                |  |                       |                         |                     | QIAEGTGITTRQQRKRVSLEPHQGP   |
|                    | ,              |  |                       |                         |                     | GTPESKKATSCFPRPMTPRDRHEGR   |
|                    |                |  |                       |                         |                     | KQSTTEAQKKAAPASTKQADRRQS  |
| 1                  | !              |  |                       |                         |                     | MAFSILNTPKKLGNSLLRRGASKKA   |
|                    |                |  |                       |                         |                     | LSKASPNTRSGTRRSPRIATTTASAA  |
| 2540               | 0000           |  | 2010                  | 041                     | 6004                | TAAAIGATPRAKGKAKH   |
| 3542               | 9039           | Α  | 3812                  | 241                     | 6884                | LSGITKMTLHATRGAALLSWVNSL  |
|                    |                |  |                       |                         |                     | HVADPVEAVLQLQDCSIFIKIIDRIH<br>GTEEGQQILKQPVSERLDFVCSFLQ   |
|                    |                |  |                       |                         |                     | KNRKHPSSPECLVSAQKVLEGSELE   |
| 1                  |                |  |                       |                         |                     | LAKMTMLLLYHSTMSSKSPRDWEQ  |
|                    |                |  |                       |                         | !                   | FEYKIQAELAVILKFVLDHEDGLNL   |
| ]                  |                |  |                       |                         | •                   | NEDLENFLQKAPVPSTCSSTFPEELS  |
|                    |                |  |                       |                         |                     | PPSHQAKREIRFLELQKVASSSSGN   |
|                    |                |  |                       |                         |                     | NFLSGSPASPMGDILQTPQFQMRRL   |
| 1                  |                |  |                       |                         |                     | KKQLADERSNRDELELELAENRKL  |
| ]                  |                |  |                       |                         |                     | LTEKDAQIAMMQQRIDRLALLNEK<br>QAASPLEPKELEELRDKNESLTMRL   |
| [                  |                |  |                       |                         |                     | HETLKQCQDLKTEKSQMDRKINQL  |
| ]                  |                |  |                       |                         |                     | SEENGDLSFKLREFASHLOOLODAL   |
|                    |                |  |                       |                         |                     | NELTEEHSKATQEWLEKQAQLEKE  |
| 1                  |                |  |                       |                         |                     | LSAALQDKKCLEEKNEILQGKLSQL   |
|                    |                |  |                       |                         |                     | EEHLSQLQDNPPQEKGEVLGDVLQ  |
|                    |                |  |                       |                         |                     | LETLKQEAATLAANNTQLQARVEM  |
|                    |                |  |                       |                         |                     | LETERGQQEAKLLAERGHFEEEKQ  |
| [                  |                |  |                       |                         |                     | QLSSLITDLQSSISNLSQAKEELEQA<br>  SQAHGARLTAQVASLTSELTTLNAT   |
|                    |                |  |                       |                         |                     | IQQQDQELAGLKQQAKEKQAQLAQ  |
|                    |                |  |                       |                         |                     | TLQQEQASQGLRHQVEQLSSSLK   |
|                    |                |  |                       |                         |                     | QKEQQLKEVAEKQEATRQDHAQQ   |
|                    |                |  |                       |                         |                     | LATAAEEREASLRERDAALKQLEA  |
|                    |                |  |                       |                         |                     | LEKEKAAKLEILQQQLQVANEARD  |
|                    |                |  |                       |                         |                     | SAQTSVTQAQREKAELSRKVEELQ  |
| ]                  |                |  |                       |                         |                     | ACVETARQEQHEAQAQVAELELQL  |
|                    | <u>'</u>       |  |                       |                         |                     | RSEQQKATEKERVAQEKDQLQEQL  |
| ]                  |                |  |                       |                         |                     | QALKESLKVTKGSLEEEKRRAADA<br>LEEQQRCISELKAETRSLVEQHKRE   |
|                    |                | -  |                       |                         |                     | RKELEEERAGRKGLEARLLQLGEA  |
| ] [                |                |  |                       |                         |                     | HQAETEVLRRELAEAMAAQHTAES  |
|                    |                |  |                       | l                       |                     | [ Z-1212 ( 1.1002) [ 1.101111 [ 1.111111 [ 1.11111 [ 1.11111 [ 1.111111 [ 1.111111 [ 1.111111 [ 1.111111 [ 1.111111 [ 1.111111 [ 1.111111 [ 1.111111 [ 1.111111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.111111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.11111 [ 1.111111 [ 1.111111 [ 1.11111111 |

| SEQ ID                  | SEQ ID              |          | SEQ ID NO: | Nucleotide  | Nucleotide                      | Amino acid sequence (X=Unknown; *=Stop               |
|-------------------------|---------------------|----------|------------|-------------|---------------------------------|--|
| NO: of                  | NO: of              |          | in USSN    | location of | location of last                | codon; /=possible nucleotide deletion; \=possible    |
| nucleo-tide<br>sequence | peptide<br>sequence | d        | 09/770,160 | first codon | codon for last<br>amino acid of | nucleotide insertion)                                |
| Sequence                | sequence            |          | ł          | sequence    | peptide                         |  |
| L                       |                     | <u> </u> |            |             | sequence                        |  |
|                         |                     |          |            |             |                                 | ECEQLVKEVAAWRDGYEDSQQEE                              |
|                         | 1                   |          |            |             | ĺ                               | AQYGAMFQEQLMTLKEECEKARQ                              |
|                         | 1                   | 1        | 1          |             |                                 | ELQEAKEKVAGIESHSELQISRQQN                            |
| }                       | 1                   | 1        | ł          | 1           |                                 | KLAELHANLARALQQVQEKEVRAQ                             |
|                         | ļ                   |          | Ì          | ļ           |                                 | KLADDLSTLQEKMAATSKEVARLE                             |
|                         |                     |          | }          |             | Ì                               | TLVRKAGEQQETASRELVKEPARA                             |
|                         |                     |          | 1          |             |                                 | GDRQPEWLEEQQGRQFCSTQAALQ                             |
|                         | ĺ                   | 1        | [          | 1           | ĺ                               | AMEREAEQMGNELERLRAALMES                              |
| ,                       | 1                   |          | 1          | ľ           |                                 | QGQQQEERGQQEREVARLTQERGR                             |
|                         | ł                   |          | Į          | 1           |                                 | AQADLALEKAARAELEMRLQNAL                              |
| ļ                       | 1                   | Į        | ļ          | ļ           |                                 | NEQRVEFATLQEALAHALTEKEGK                             |
| j                       | }                   | j        | ,          | ]           |                                 | DQELAKLRGLEAAQIKELEELRQTV                            |
| ļ                       |                     | ļ        |            |             |                                 | KQLKEQLAKKEKEHASGSGAQSEA                             |
|                         | ·                   |          |            |             |                                 | AGRTEPTGPKLEALRAEVSKLEQQC                            |
| 1                       | ł                   |          | ł          |             |                                 | QKQQEQADSLERSLEAERASRAER                             |
|                         |                     |          |            | 1           |                                 | DSALETLQGQLEEKAQELGHSQSAL                            |
|                         | ]                   |          | J          |             |                                 | ASAQRELAAFRTKVQDHSKAEDEW                             |
|                         | •                   |          |            |             |                                 | KAQVARGRQEAERKNSLISSLEEEV                            |
| {                       | ĺ                   | 1        |            | <b>[</b>    |                                 | SILNRQVLEKEGESKELKRLVMAES                            |
|                         | ĺ                   | 1        | ĺ          |             |                                 | EKSQKLEE/RLRLLQAETASNSARA                            |
| 1                       | ļ                   | 1        | ļ          | 1           |                                 | AERSSALREEVQSLRE\EAEKQRVA                            |
| Į                       | Ì                   |          |            | <b>[</b>    |                                 | SENLRQELTSQAERAEELGQELKA                             |
|                         | 1                   | İ        |            |             |                                 | WQEKFFQKEQALSTLQLEHTSTQA                             |
|                         | ĺ                   | -        |            |             |                                 | LVSELLPAKHLCQQLQAEQAAAEK                             |
| ľ                       | İ                   | ì        | 1          |             |                                 | RHREELEQSKQAAGGLRAELLRAQ                             |
|                         |                     | ł        |            | Į.          |                                 | RELGELIPLRQKVAEQERTAQQLRA                            |
| Į                       | )                   |          |            |             | i                               | EKASYAEQLSMLKKAHGLLAEENR                             |
| ,                       |                     |          |            |             |                                 | GLGERANLGRQFLEVELDQAREKY                             |
| ļ                       |                     |          | ĺ          |             |                                 | VQELAAVRADAETRLAEVQREAQS                             |
|                         |                     | Ì        | ļ          |             |                                 | TARELEVMTAKYEGAKVKVLEERQ                             |
|                         | ĺ                   | 1        | Ì          | i '         |                                 | RFQEERQKLTAQVEELSKKLADSD                             |
| ł                       |                     | }        |            |             |                                 | QASKVQQQKLKAVQAQGGESQQE                              |
| 1                       |                     | ļ        |            |             |                                 | AQRFQAQLNELQAQLSQKEQAAEH                             |
| ļ į                     |                     | ļ.,      |            | ļ           |                                 | YKLQMEKAKTHYDAKKQQNQELQ                              |
| <b>j</b>                |                     |          |            |             |                                 | EQLRSLEQLQKENKELRAEAERLG                             |
|                         |                     |          |            |             |                                 | HELQQAGLKTKEAEQTCRHLTAQV<br>RSLEAQVAHADQQLRDLGKFQVAT |
|                         |                     |          |            |             |                                 | DALKSREPQAK\PQLDLSIDSLDLSC                           |
|                         |                     |          |            |             |                                 | EEG\TPL\SITSKLPRTQPDGTSVPGE                          |
|                         |                     |          |            |             |                                 | PASPISQRLPPKVESLESLYFTPIPAR                          |
| <b>j</b>                |                     | ]        |            | ļj          |                                 | SQAP\LESSLDSLGDVFL\DSGRKTR                           |
|                         |                     |          |            |             |                                 | SARRTTQIINI\TMTKK\LDV\EEPD/                          |
|                         |                     |          |            |             |                                 | SAPNLSFYS\TRSAPASQASLRATSS                           |
|                         |                     |          |            |             | 1                               | TQSLARLGSPDYGNSALLSLPGYRP                            |
|                         |                     |          |            |             |                                 | TTRSSARRSQAGVSSGAPPGRNSFY                            |
|                         |                     |          |            |             |                                 | MGTCQDEPEQLDDWNRIAELQQRN                             |
|                         |                     |          |            |             |                                 | RVCPPHLKTCYPLESRPSLSLGTITD                           |
|                         |                     |          | !          |             |                                 | EEMKTGDPQETLRRA\SMQPIQIAE                            |
|                         |                     |          |            |             |                                 | GT\GITTRQQRKRVSLEPHQGPGTPE                           |
| }                       |                     |          |            |             |                                 | SKKATS\CFPRPMTPRDRHEGRKQ\S                           |
|                         |                     |          |            |             |                                 | TTEAQK\KAAPASTKQA\DRRQSM\                            |
|                         |                     |          |            |             |                                 | AFSI\LNTPKKLGNS\LLRTG*PQRKA                          |
|                         |                     |          | Ì          |             |                                 | LSK\ASPNTRSG\TRRSPR\IATTTASA                         |
|                         |                     | [        | ĺ          |             |                                 | ATA\AAIGCHPSRPRGKGKALKGPV                            |
|                         |                     |          | !          |             |                                 | PVSGPHLCSPMVAVTWSSAYCPSQ                             |
|                         |                     |          | l          |             |                                 | CLLSAPRPTVAKPLETVMPARTLA                             |
|                         |                     |          | ļ          |             |                                 | WSLVLHWRLLGAGPGGLEHGQCG                              |
|                         |                     | ]        | İ          |             |                                 | RSPYLASFFLKAKSLLHHNQI                                |
|                         |                     |          |            |             |                                 |  |

| SEQ ID             | SEQ ID         |     | SEQ ID NO:            |                         |                                    | Amino acid sequence (X=Unknown; *=Stop                                    |
|--------------------|----------------|-----|-----------------------|-------------------------|------------------------------------|---|
| NO: of nucleo-tide | NO: of peptide | tho | in USSN<br>09/770,160 | location of first codon | location of last<br>codon for last | codon; /=possible nucleotide deletion; \=possible   nucleotide insertion) |
| sequence           | sequence       | ١   | 05/7/0,100            |                         | amino acid of                      | nucleonae insertion)  |
|                    |                |     |                       | sequence                | peptide                            | (   |
| 3543               | 9040           | A   | 3813                  | 1                       | sequence<br>3466                   | EKEKAAKLEILQQQLQVANEARDS  |
| 35 .5              |                |     | }                     | ] -                     | }                                  | AQTSVTQAQREKAELSRKVEELQA  |
| 1                  | ļ              |     |                       |                         |                                    | CVETARQEQHEAQAQVAELELQLR  |
|                    |                |     |                       |                         |                                    | SEQQKATEKERVAQEKDQLQEQLQ  |
| -                  |                |     |                       | ĺ                       |                                    | ALKESLKVTKGSLEEEKRRAADAL  |
|                    |                |     |                       | 1                       |                                    | EEQQRCISELKAETRSLVEQHKRER   |
|                    | }              |     | ļ                     |                         |                                    | KELEEERAGRKGLEARLQQLGEAH  |
|                    | ļ              |     |                       | <u> </u>                |                                    | QAETEVLRRELAEAMAAQHTAESE  |
|                    | :              |     |                       |                         |                                    | CEQLVKEVAAWRERYEDSQQEEAQ YGAMFQEQLMTLKEECEKARQELQ                         |
| 1                  | 1              | ł   | ļ                     | ĺ                       |                                    | EAKEKVAGIESHSELQISRQQNELA   |
|                    | }              |     |                       | 1                       | }                                  | ELHANLARALQQVQEKEVRAQKLA  |
|                    | <b>,</b>       | ļ   |                       |                         |                                    | DDLSTLQEKMAATSKEVARLETLV  |
| İ                  |                | 1   |                       |                         |                                    | RKAGEQQETASRELVKEPARAGDR  |
|                    |                | ł   |                       |                         |                                    | QPEWLEEQQGRQFCSTQAALQAME  |
| }                  | ļ              | ł   |                       |                         |                                    | REAEQMGNELERLRAALMESQGQQ  |
|                    | }              | }   |                       | ]                       |                                    | QEERGQQEREVARLTQERGRAQAD  |
|                    |                |     |                       |                         |                                    | LALEKAARAELEMRLQNALNEQRV  |
|                    |                |     |                       | {                       |                                    | EFATLQEALAHALTEKEGKDQELA  |
|                    |                |     |                       |                         |                                    | KLRGLEAAQIKELEELRQTVKQLKE  <br>  QLAKKEKEHASGSGAQSEAAGRTE                 |
|                    |                | )   |                       | }                       |                                    | PTGPKLEALRAEVSKLEQQCQKQQ  |
|                    |                |     |                       |                         |                                    | EQADSLERSLEAERASRAERDSALE   |
|                    |                |     | :                     |                         |                                    | TLQGQLEEKAQELGHSQSALASAQ  |
|                    |                |     |                       |                         |                                    | RELAAFRTKVQDHSTAEDEWKAQV  |
|                    |                |     |                       |                         |                                    | ARRRQEAERKNSLITILEEEVSILNR  |
|                    | }              |     |                       |                         |                                    | QVLEKEGESKELKRLVMAESEKSQ  |
|                    |                |     |                       |                         |                                    | KLEERLRLLQAETASNSARAAERSS   |
|                    |                |     |                       |                         |                                    | ALREEVQSLREEAEKQRVASENLR QELTSQAERAEELGQELKAWQEKF                         |
|                    |                |     |                       | }                       |                                    | FQKEQALSTLQLEHTSTQALVSELL   |
|                    |                |     |                       |                         |                                    | PAKHLCQQLQAEQAAAEKRHREEL  |
|                    | }              |     |                       |                         |                                    | EQSKQAAGGLRAELLRAQRELGELI   |
|                    | ļ              |     |                       |                         |                                    | PLRQKVA\EQERTAQQLRAEKASYA   |
|                    |                |     | •                     |                         |                                    | EQLSMLKKAHGLLAEENRGLGERA  |
|                    |                |     |                       |                         |                                    | NLGRQFLEVELDQAREKYVQELAA  |
|                    |                |     |                       |                         |                                    | VRADAETRLAEVQREAQSTARELE  |
|                    |                |     | :                     |                         |                                    | VMTAKYEGAKVKVLEERQRFQEER  |
|                    |                |     |                       |                         |                                    | QKLTAQVEQLEVFQREQTKQVEEL   SKKLADSDQASKVQQQKLKAVQA                        |
| 1                  |                |     |                       |                         | -                                  | QGGESQQEAQRLQAQLNELQAQLS  |
| 1                  | ]              |     |                       |                         |                                    | QKEQAAEHYKLQMEKAKTHYDAK   |
|                    |                |     |                       |                         |                                    | KQQNQELQEQLRTLEQLQKENKEL  |
|                    |                |     |                       |                         |                                    | RAEAERLGHELQQAGLKTKEAEQT  |
|                    |                |     |                       |                         |                                    | CRHLTAQVRTLEAQVAHADQQLRD  |
|                    |                |     |                       |                         |                                    | LGKFQVATDALKSREPQAKPQLDL  |
|                    |                |     |                       |                         |                                    | SIDSLDLSCEEGTPLSITRSGGSLPPY   |
| 2511               | 0041           |     | 2014                  | 25                      | 266                                | VCLWSACCLSGCILVR  |
| 3544<br>3545       | 9041           | A   | 3814<br>3815          | 35<br>383               | 266<br>628                         | MDPSAGVTIVTCLASLFSGRLVRFR   |
| 2545               | 7042           |     | ديود                  | دەد                     | 020                                | CSHDWRNYTERVLLFQWVELKTKC  |
|                    |                |     |                       |                         |                                    | WRHTEAGLKPSHYFLEKMKKTLRE  |
|                    |                |     |                       |                         |                                    | SQATYDRI*   |
| 3546               | 9043           | A   | 3816                  | 2                       | 513                                | DIYGGDYERFGLQGSAVASSFGNM  |
|                    |                |     |                       |                         |                                    | MSKEKRDSISKEDLARATLVTITNNI  |
|                    |                |     |                       |                         |                                    | GSTA\WLCALNENIDRVVFVGNFLR   |
|                    |                |     |                       |                         |                                    | INMVSMKLLAYAMDFWSKGQLKA   |
| L                  | L              |     |                       |                         |                                    | LFF/VEHQGY\LGAVGALLGTVQND   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|--|
|   |   |     |                                     |   |  | LMTSRRRGSGRETASQKGQRTKKL<br>LLEKVKVALGRKPSHLWQMNLLGF<br>C  |
| 3547  | 9044                                    | A   | 3817                                | 29  | 175  | KSRPGTVAHACNPSTLGSRGGRIIPA<br>QEFKTSLGNTVSE\PCLYLRKNN  |
| 3548  | 9045                                    | A   | 3818                                | 171   | 419  | KFFPFQSLWWERRAFPLKGEDMAA<br>LLCQDEKKDQVERSSTAFHGEIFGT<br>SVPENG\HHPKKQSDGMEEYKTFGL<br>GLTNVKKNR  |
| 3549  | 9046                                    | A   | 3819                                | 2   | 1209   | WPSKETAFLNTTQMPCLQSASTWS SYEHNSESYLLREHVSELDSSFHSV LSLPSDVPLHFHFETLLKKTEIKGNL AENKFVDEYIISPSPVHSTLNQWRN GYSPICKPQIRSESSAQLLQGRKKRH LSETALGERTKL\KEFDFHHTESGSH SNFTAVSNVNVLSRIQNSSRNTARR R\LRSESSYDI\DNIV\IPMSL\VAPAK LEKLQYKEILTPSWRMVVLQPLDE YNLGKEEIEDLSDEVFSLRHKKYEE REQARWSLWEQSKWHRRNSRAYS KNVEGQDLLLKEYPNNFSSSQQCA AASPPGLPSENQDLCAYGLPSLNQS QETKSLWWERRAFPLKGEDMAALL CQDEKKDQVERSSTAFHGEIFGTSV PENGHHPKKQSDGMEEYKTFGLGL TNVKKNR |
| 3550  | 9047                                    | A   | 3820                                | 7   | 447  |  |
| 3551  | 9048                                    | A   | 3821                                | 1   | 373  | EQQVLRSTCLGVGAKV/L/VEGMVL<br>QYSTQKGILT/ENHIQEINAQ/TTGLR<br>/KTMLLLDILPSRGPKAFDT/FLDSLQ<br>EFPWVREKLKKAREEAMTDLPAGL<br>EEKGRTGRRMGWGAGEEKGQKCQ<br>TVGMRT   |
| 3552  | 9049                                    | A   | 3822                                | 1   | 708  | TPVWWNSLWGRFPNSQDSGCSFSP PPQRYVVADGEMEARDKQVLRSLR LELGAEVLVEGLVLQYLYQEGILTE NHIQEINAQTTGLRKTMLLLDILPSR GPKAFDTFLDSLQEFPWVREKLKK AREEAMTRPCLAVDRLTGIP\SHILN SSPSDRQINQLAQRLGPEWEPMVLS LGLSQTDIYRCKANHPHNVQSQVV EAFIRWRQRFGKQATF\RTLDNGL\R AVEVDPSLLLHMLE  |
| 3553  | 9050                                    | A   | 3823                                | 791   | 1090   | HFLHGPLAQEDKSERERWQ\HLAD\ LADFALA\MKDTLTNINNQSFNNFM LRIGEHTPAGLPRSRLPSHAGAWPP TRRDMRLRTTEAIRVGRFTHSQGKE T  |
| 3554  | 9051                                    | C   | 3824                                | 172   | 243  | MRPSHGPSEQLCSTLSPPIKPRPT*  |
| 3555<br>3556                                | 9052                                    | A   | 3825<br>3826                        | 1   | 596  | PGWEKRMSRSSVVNTQEALPTAAIP<br>RDAKGRVYYFNHITNASQWERPSG\<br>NS\SSGGKNGQGEPAVV\RC\SHLLV<br>KHSQSR\RPSSW\RQ\EKITRTKGGGP<br>GSLINGLHPEDSSSGEEDF\ESLASQF<br>SDCK/SSAKARG\DLGAFQQKVRLQ<br>KPFLKTPRFAL\RTGGDERGPCFTD\  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|---|
| 3557  | 9054                                    | A   | 3827                                | 1   | 295  | SGIHIILPHLSEGGEPRPGLGAGQGG<br>ETVFHSVTQSGMQWHNLASLQRLP<br>LRLKQTSHLSLLSSWDCRHMPPNL<br>A/NF/CVLRRDKISPFCPGWASNPPG<br>LKQCIGILKYPQALTPYELINIWEGI  |
| 3558  | 9055                                    | A   | 3828                                | 131   | 771  | MGVILEPSGTTVPLVSSV*LLVWDH GPTRIVGLIIRLGPR/YPLVSSSSKSG RTMPNILDDIIASAVENKIPPSKTSKI NVKPELKEEPEESIISAVDENNKLYS DIPHSWICDALQKAFTDKEELLKQQ ASNLHEQKKAGVIFEAEEVITLLTS VLKTSSASRTSLSSRHQFAPGATVL YKGDKMVLNLDRSRVPTECIEKIEA ILKELEKPAP   |
| 3559  | 9056                                    | A   | 3829                                |   | 655  | MPVNAGGKVQESQKPPTLIPEPKDS QANFKSSSEQSLTEMWRPNNNLSK EKTEWHVEKSSGKLQAAMASVIVR PSSSTKTDSMPAMQLASKDRVSERS SAGAHKTDCLKLAEAGETGRIILPN VNSDSVHTKSEKNFQAVSQGSVPSS VMSAVNTMCNTKTDVITSAADTTS VSSWGGSEVISS/CIKYHFGLYIIRM CIFKKCQSASGSKTRMQGYLE   |
| 3560  | 9057                                    | A   | 3830                                | 1   | 515  | LTLENQIKEEREQDNSESPNGRTSPL VSQNNEQGSTLRDLLTTTAGKLRV GSTDAGIAFAPVYAMGAPSSKSGRT MPNILDDIIASVVENKIPPSKTSKINV KPELKEEPEESIISAVDENNKLYSDIP HSWICEKHILWL\RIIIIAVIGSFSKNV GNKDSLQWFLVCIRK  |
| 3561  | 9058                                    | A   | 3831                                | 6   | 226  | RKGGFFVDLFVR\VSNQVAVNMYK<br>QLGYSVYRTVIEYYSASNGEPDEDA<br>YGKLPSMAVSPRSRNSYILSTDCSI  |
| 3562  | 9059                                    | A   | 3832                                | 37  | 611  | SGGAMTTLRAFTCDDLFRV/FNNI<br>NLDPLTETYGIPFYLQYLAHWPEYF<br>IVAEAPGGELMGYIMGKAEGSVAR<br>EEWHGHVT\ALSVAPEF\RRLGLAA<br>KLMELLEEISERKGGIFLVDLF\VRV<br>SNQVA\VNMYK\QLGYSVYR\TVI\E<br>YYFGPATGEP**GTLIDMRESTFPRD<br>TGERNPIIP\LPHPGGGLEDH   |
| 3563  | 9060                                    | A   | 3833                                | 1   | 191  | MQK*ITAWAPAPMKIKIIASPERKYS<br>VWIGGSIWPQLST/FQQMWISKQEY<br>DESGPSIVHRKCF  |
| 3564  | 9061                                    | A   | 3834                                | 2   | 1203   | LSRRCQLSHSVLPPLRRRVSLPVAM EEEIAALVIDNGSGMCKAGFAGDD APRAVFPSIVGRPRHQGVMVGMGQ KDSYVGDEAQSKRGILTLKYPIEHG IVTNWDDMEKIWHHTFYNELRVAP EEHPVLLTEAPLNPKANREKMTQIM FETFNTPAMYVAIQAVLSLYASGRT TGIVMDSGDGVTHTVPIYEGYALPH AILRLDLAGRDLTDYLMKILTERGY SFTTTAEREIVRDIKEKLCYVALDFE QEMATAASSSSLEKSYELPDGQVITI GNERFRCPEALFQPSFLGMESCGIH ETTFNSIMKCDVDIRKDLYANTVLS GGTTMYPGIADRMQKEITALAPST |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | MKIKIIAPPERKYSVWIGGSILASLST<br>FQQMWISKQEYDESGPSI\VHRKCF   |
| 3565  | 9062                                    | A | 3835                                | 3   | 412  | SRFPEGLFQPFFPG\MKSCGIHETTF HSH/IIKFDVAIR\KDLYANTLLPGGN HQVSGALLTGMQKEIHAPAAQATL RFKIIAPPGSASTRW/VGSVGSILASL STFQ\QMW\ISKQE\YDESGPLHSSTA KCFLNGLSQIA  |
| 3566  | 9063                                    | A | 3837                                | 3   | 480  | SHITVLTLNVNGLNAPVKRHRLAN WIKSQDPPVCFIQETHLTCRDTHRL KIKGWRKIYQANGK/QKKAGVAIL VSDKTDFKPTKI/KRQGHYIMVKGS MQQEEQVLRDPQRDLDSHTMIMGD FNTLLSILDRSTRQKVNKDIQELKSA LHQADLIDIYRTLH   |
| 3567  | 9064                                    | A | 3838                                |   | 834  | MGDFNTPLSTLDRSTRQKVNKDIQE LNSALYQVDLIDIYRTLHPKSTEYTF FSAPHHTYSKIDHIVGSKALLSKCK RTEIITNCLSDHSAIKLELTIKKLTQN RSTTWKLNNLLLNDYWKYKQPSEN KHLYANKLENLEEMDKFLDTYTLP RLNQEEVESLNRPITRSEIEAITNSLP T/KKSPGPDGFTAEFYQ\MLEVLAR AIRQEKEIKGIQLVKEEVKLSLFADD MIVYLENPIVSAQNLLKLIGNFSKVS GYKI/NVQKSQAFLYTNNRQTESQI M   |
| 3568  | 9065                                    | В | 3839                                | 1   | 543  | MGDFNTPLSTLDRSTRQKVNKDIQE<br>LNSALYQVDLIDIYRTLHPKSTEYTF<br>FSAPHHTYSKIDHIVGSKALLSKCK<br>RTEIITNCLSDHSAIKLELTIKKLTQN<br>RSTTWKLNNLLLNDYWKYKQPSEN<br>KHLYANKLENLEEMDKFLDTYTLP<br>RLNQEEVESLNRPITRSEIEAITNSLP<br>TKK*   |
| 3569  | 9066                                    | A | 3840                                |   | 1470   | MEQSWVENDFDELREEGFRRSNFS EVKEESRTQPKEAKNLARRDTHRL KIKGWRKIYEENGKQKKAGVPILVS DKTDFKPTKIKRDKEGHYTMVKGSI QQEELTILNIYAPNTGAPRFIKQVLR DLQRDLDSHTIIMEDFNTPLSTLDRS TRQKVNKDIQELNSALQQVDLIDIC RMLHPKSTEYTFFSAPHHTYSKIDH RVGSKALLSKCKRTEIITNCLSDHSA IKLELRIKKLTENRSTAYNLNNLLL NDYGVHNEMKSEIKMFFETNENKD TTYQNLWDTFKAVEIQTTIREYYKH LYRNKLENLEEMDKFLDTYTLPRV NQEEVESLNRPITGSEIEAIINSLPTK KSPGPDGFTAEFYQRYKEELVPFLL KLFQSIEKEGILPNSFYDASIILIPKPG KDTTKKENFRPISLMNIDAKIMNKIL ANQIQQHIKKLIHHDQVGFIPGMQV WFNIGKSINVIQHINRTKDQKNHRII SIDAEKAF |
| 3570  | 9067                                    | A | 3841                                | 2807  | 4148   | SIDAERAF   |
| 3571  | 9068                                    | - | 3842                                | 2   | 1516   | WRKIYQANGK/QKKAGVAILVSDK<br>TDFKPIKIKRDKEGHYIMVKGSIQQ  |

| SEQ ID                  | SEQ ID              | Me  | SEQ ID NO: | Nucleotide                 | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop                 |
|-------------------------|---------------------|-----|------------|----------------------------|-----------------------|---|
| NO: of                  | NO: of              | tho | in USSN    | location of                | location of last      | codon; /=possible nucleotide deletion; \=possible       |
| nucleo-tide<br>sequence | peptide<br>sequence | đ   | 09/770,160 | first codon<br>for peptide | codon for last        | nucleotide insertion)                                   |
| sequence                | sequence            | -   |            | sequence                   | amino acid of peptide |   |
|                         |                     |     |            |                            | sequence              | <u></u>   |
|                         |                     |     |            |                            |                       | EELTILNIHAPNTEAPRFIKQVLSDL                              |
|                         |                     |     |            | 1                          | ļ                     | QRDLDSHTIIMGDFNTPLSTLDRSTR                              |
| <u> </u>                |                     |     |            | }                          | ļ                     | RKVNKDTQELNSALHQVDLIDIYRT                               |
|                         |                     |     |            |                            |                       | LHPKSTEYTFLSAPHHTYSKTDHIV                               |
|                         |                     |     |            | [                          |                       | GSKALLSKCKRSDIITNCLSDHSAIR                              |
| 1                       |                     | 1   | [          | 1                          |                       | LELRIKKLTQNRSTTWKLNNLLLND                               |
|                         |                     |     |            |                            |                       | YWVHNEMKAEIKMFFQTNENKDT                                 |
| ł                       |                     | ł   | }          | -                          |                       | TYQNLWDTFKAEEVKSLNRPITGSE                               |
| }                       |                     |     | ł          | 1                          |                       | IVAIINSLPTKRSPGPDGFTVEFYQR                              |
|                         |                     | 1   | l          |                            |                       | CRKAFDKIQRPFTLKTLNKLAIDGM                               |
|                         | ļ                   |     | }          |                            |                       | YLKIIRAIYDKPTANVILNGQKLEVF                              |
|                         |                     | 1   | ]          |                            |                       | PLKTGTRQGCPLSPLLFNIVLEVLAR<br>AIRQEKEIKGIQLRKEKVKLSLFVD |
|                         |                     |     |            |                            |                       | DMIVCLENPIISVQKLLKLISNFSKV                              |
|                         | 1                   | -   |            |                            |                       | SGYKINVQKSQAFLYINNRQTESQI                               |
| 1                       |                     | 1   |            |                            |                       | MSELPFTIASKRIKYLGIQLTRDVKG                              |
| }                       |                     |     |            |                            | 1                     | LFKENYKPLLNKIKEGTNKWKNVP                                |
|                         | 1                   |     | }          |                            |                       | CSWIGKINIMKMAILPKETPSHMQR                               |
|                         |                     |     |            |                            |                       | HT  |
| 3572                    | 9069                | Α   | 3843       | 3                          | 120                   | FIIDKKQKQLKSPSIDEWIK\KMWYI                              |
|                         |                     |     |            |                            |                       | HKIEYHSAIKGIKF  |
| 3573                    | 9070                | A   | 3844       | 2                          | 244                   | SRLSFPSSWDYICAPPHLANFCIFLV                              |
|                         |                     |     |            |                            |                       | E\RSVAMLPRLVSSSWAQAILPPWP                               |
|                         |                     |     |            |                            |                       | PKAQGFTGMGHHAQSAAGLYIFSG                                |
| 0.554                   |                     | 1   |            |                            |                       | LGSNAI  |
| 3574<br>3575            | 9071                | A   | 3845       | 1                          | 2616                  |   |
| 33/3                    | 9072                | Α   | 3846       | 1 .                        | 773                   | QTSPMIPSIVVHCVNEIEQRGLTETG                              |
|                         | <u>;</u>            | 1 1 |            |                            |                       | LYRISGCDRTVKELKEKFLRVKTVP                               |
|                         |                     |     |            |                            |                       | LLSKVDDIHAICSLLKDFLRNLKEPL                              |
|                         | }                   |     |            | ]                          |                       | LTFRLNRAFMEAAEITDEDNSIAAM<br>YQAVGELPQANRDTLAFLMIHLQR   |
|                         | ]                   |     |            |                            |                       | VAQSPHTKMDVANL\AKVFGPTIVA                               |
|                         |                     | 1 1 | ·          | 1                          |                       | HAVPNPDPVTMLQGHQGVQPKVV                                 |
|                         |                     |     |            | [                          |                       | E\RLLFLGLWEYWEFSFMDGWEQG                                |
|                         |                     | 1 1 |            |                            | !                     | GTFDPLHVIENSNAFSTPQTPDIKAV                              |
|                         |                     |     |            |                            |                       | PGGGLCVHFTAGEAEIQKGPPSCGQ                               |
|                         |                     | 1 1 |            |                            |                       | NKSTAAFNY   |
| 3576                    | 9073                | A   | 3847       | 1                          | 422                   | CGRVRACGRVREPSSQIHHNMANL                                |
|                         |                     | 1 1 |            | }                          |                       | FIRKMVNPLLYLSRHTVKPRALSTF                               |
|                         |                     |     |            |                            |                       | LFG\SIR\SAAPRGCGNPGAAVR\SLL                             |
|                         |                     |     |            |                            |                       | SPGLPA/HHLPACGWGFKKQDCPLR                               |
|                         |                     |     |            |                            |                       | KRCKDCY\LVK\RRGRWYVYCKT\H                               |
| 2500                    | 0054                | 1_1 |            | 10.00                      |                       | PRHKQKTRCRTLFPPESRT                                     |
| 3577                    | 9074                | A   | 3848       | 1959                       | 4060                  | RFFSFFFFETESHSVAQAGVQWCN                                |
|                         |                     |     |            |                            |                       | LGSLQAPPPG\SRHSPASASRVAGTT                              |
|                         |                     |     |            |                            |                       | GAHHHARLIF\VFLVETGFHRISQDG                              |
|                         |                     |     |            |                            |                       | LDLLTS*SARLGIPKCWDYRCEPPH<br>LASI                       |
| 3578                    | 9075                | A   | 3849       | 1                          | 1320                  | LASI  |
| 3579                    | 9076                | A   | 3850       | 1239                       | 1733                  | ALFFSFFFFFFETESRSVAQAGVQW                               |
|                         |                     | "   | -          |                            |                       | RDLGSLQAPP\PGSRRSPASASRVAG                              |
|                         |                     |     |            |                            |                       | TTGARHRIFFVFLVEMGFHRDLDFP                               |
|                         |                     | ]   |            |                            | ļ                     | TS*SA\QGLQA*ATAPGPFLFFFFFF                              |
| -                       |                     |     | 1          | 1                          | ĺ                     | LRRSLTLLPRLECNGAILARCNLYL                               |
|                         |                     |     |            |                            |                       | LGSSNSPASASRVAGIAGMHHHAR                                |
|                         |                     |     |            |                            |                       | LIFCILVEMGFHHL  |
| 3580                    | 9077                | A   | 3851       | 131                        | 436                   | VTHLHQKKGSVFFFFFFFETESCPV                               |

| ASASRVARTTGAHH   ETGFHHVSQDGLDLC   CPP   | SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|--|---|---|---|-------------------------------------|-------------------------|--|--|
| CPSQNSQVG/CLKSP    3582   9079   A 3853   1   230   FQLHQHLLPRHDY    NSLYEKMKEGERRK QRLDNVVAKKSVPQ VKSSC     3583   9080   A 3854   3   126   SCCGYGNQFKGPGG NVSGGGAGGRGWK    3584   9081   A 3855   1   1021   MPRLEAFVNNQTCP    KDQGPIVPAPVKGGC GPMVSAPIKDQDPM MATAPIKNQGSMVS    PGPVKDQDVVVPEH APW*RIKGPVVPRSG LVKDQGPTVLQPPK    NQVPIVPVPLKDQDP P/TLPG/PLGSETAAP GSSPAPPRAPGSGLR TRDRAGTVSGALRT TRDRAGT |   |   |   |                                     |                         |  | AQAGVQWRDLRSLQAPPPG\SRHSP<br>ASASRVARTTGAHHYTRLIF\VCLV<br>ETGFHHVSQDGLDLQDQFPWSLFLF<br>CPP   |
| NSLYEKMKEGERRK   QRLDNVVAKKSVPQ   VKSSC  |   | 9078                                    | Α | 3852                                | 56                      | 192  | KFLFSPKALNSVRKFFQYFPPPKKR/<br>CPSQNSQVG/CLKSPP*GEKF  |
| NVSGGGAGGRGWKI   3584   9081   A 3855   1   1021   MPRLEAFVNNQTCM   DTIGKQSELSFGKAK   KVGKLRSTVVKQLPI   KDQGPIVPAPVKGEC   GPMVSAPIKDQDPM   MATAPIKNQGSMVS   PGPVKDQDVVVPEH   APW*RIKGPVVVPEH   APW*RIKGPVVPPLKDQDP   PTLPG/PLGSETAAP   GSSPAPPRAPGSGLR   TRDRAGTVSGALRTI   KGPCWVPPPLLQIQ   GRIVPEPLKNQVPIVV   QRSRFSCQVVAPVKI   KNQDPILPVLVKDQC   GRIVPEPLKNQVPIVV   VPVPAKDQGPAVPEI   LSLPTVSPLPRVMIPT   VPVPAKDQGPAVPEI   LSLPTVSPLPRVMIPT   DNIKQWKPPDGSFIQ   LAVNFDGGLVFGAA   ETWAPIFKRVHAVAV   IFACAFFQVSESRLLIT   YREDDTATEETHPVS   FLMNVEFFLSLFFSF   EDLRKCTFIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   VEKYGFTHLSTGELL   SKLIRDIMERGDLVP   MVASLGDTRGFLIGGFG   NUVASLGET   MVASLGDTRGFLIGGFG   NUVASLGET   MVASLGDTRGFA   NUVASLGET   MVASLGDTRGFA   NUVASLGET   MVASLGDTRGFA   NUVASLGET   M | 3582  | 9079                                    | A | 3853                                | 1                       | 230  | FQLHQH\LLNPKHDYRGWAKWNR<br>NSLYEKMKEGERRK\RRSAIPYLQG<br>QRLDNVVAKKSVPQFFPLRVRDPG<br>VKSSC  |
| DTIGKQSELSFĞKAK   KVGKLRSTVVKQLP  KDQGPIVPAPVKGEC   GPMVSAPIKDQDPM   KDQGPIVPAPVKGEC   GPMVSAPIKDQDPM   MATAPIKNQGSMVS  PGPVKDQDVVVPEH   APW*RIKGPVVVPSF   LVKDQGPTVLQPPK] NQVPIVPVPLKDQDP   PTLPG/PLGSETAAP   GSSPAPPRAPGSGLR: TRDRAGTVSGALRTI   KGPCWVPPPPLLQIQ   GRSFSCQVVAPVK]   ROMENT   KOMPTIVE   CONTROL | 3583  | 9080                                    | A | 3854                                | 3                       | 126  | SCCGVGNQFKGPGGGGG/RGGG/RR<br>NVSGGGAGGRGWKNERKER   |
| QRSRFSCQVVAPVKN KNQDPILPVLVKDQC GRIVPEPLKNQVPIVE VPVPAKDQGPAVPEI LSLPTVSPLPRVMIPT LSLPTVSPLPRVMIPT DPIKQWKFPDGSFIQ LAVNFDGGLVFGAA ETWAPIFKRVHA\AV IFACAFDQ\SESRLL\TYREDDTATEETHPVS FLMNVEFFLSLFFSF SS87 9084 A 3858 I 589 EDLRKCTFIFIIGGPGS VEKYGFTHLSTGELL SKLIRDIMERGDLVPS MVASLGDTRGFLIDG EFGRRIGDP\QLVIGK RL\LQRSRSSLPVDDT AYYR\ASIPVIAYYET GTPEDVFLQLCTAIDS GTPEDVFLQLCTAIDS AFVGLSKITTWYQYC NILVSGNEIRQFARFN GVPLGEEYILVFSRTG  |   |   |   |                                     |                         |  | MPRLEAFVNNQTCPKKECGAASEG DTIGKQSELSFGKAKMARETHWPK KVGKLRSTVVKQLPKTFQAISSTET KDQGPIVPAPVKGEGPIVPAPVKDE GPMVSAPIKDQDPMVPEHPKDESA MATAPIKNQGSMVSEPVKNQGLSG\ PGPVKDQDVVVPEH\*KGHDSA\LV APW*RIKGP\VVPRSPVKNQDPILPV LVKDQGPTVLQPPKNQGRIVPEPLK NQVPIVPVPLKDQDPLVPVPAKDQE P/TLPG/PLGSETAAPVPAHSHSPPPA GSSPAPPRAPGSGLRLPCSLAPRDLG TRDRAGTVSGALRTMRHPTGGLCQ KGPCWVPPPPLLQIQHFGPP |
| FTNPKNPVRAVVIHP DNIKQWKFPDGSFIQ LAVNFDGGLVFGAA ETWAPIFKRVHA\AV IFACAFDQ\SESRLL\I YREDDTATEETHPVS FLMNVEFFLSLFFSF  3587 9084 A 3858 I 589 EDLRKCTFIFIIGGPGS VEKYGFTHLSTGELL SKLIRDIMERGDLVPS MVASLGDTRGFLIDG EFGRRIGDP\QLVIGK RL\LQRSRSSLPVDDT AYYR\ASIPVIAYYET GTPEDVFLQLCTAIDS 3588 9085 A 3859 I 557 KLLSPKQPLLRAQLK AFVGLSKITTWYQYG NILVSGNEIRQFARFN GVPLGEEYILVFSRTG   | 3585  | 9082                                    | A | 3856                                | 1                       | 448  | SSRKDQGLVVSGPVKDQDVVVPEH<br>QRSRFSCQVVAPVKNQGPVVPESV<br>KNQDPILPVLVKDQGPTVLQPPKNQ<br>GRIVPEPLKNQVPIVPVPLKDQDPL<br>VPVPAKDQGPAVPEP\LKTQGP/KGT<br>LSLPTVSPLPRVMIPTAPHTEYIESSP  |
| VEKYGFTHLSTGELL SKLIRDIMERGDLVPS MVASLGDTRGFLIDG EFGRRIGDP\QLVIGK RL\LQRSRSSLPVDDT AYYR\ASIPVIAYYET GTPEDVFLQLCTAIDS 3588 9085 A 3859 1 557 KLLSPKQPLLRAQLK AFVGLSKITTWYQYG NILVSGNEIRQFARFN GVPLGEEYILVFSRTG  |   | 9083                                    | A | 3857                                | 1                       | 573  | DPQFISGSPESPIRLWCVGLGNTKVT<br>FTNPKNPVRAVVIHPRHYTFASGSP<br>DNIKQWKFPDGSFIQNLSGHNAIINT<br>LAVNFDGGLVFGAANGPMHLWDW<br>ETWAPIFKRVHA\AVQPG\SLDSESG<br>IFACAFDQ\SESRLL\TAEADKP\IKV<br>YREDDTATEETHPVSWKPEIIKRKR<br>FLMNVEFFLSLFFSF  |
| AFVGLSKITTWYQYC<br>NILVSGNEIRQFARFN<br>GVPLGEEYILVFSRTC  |   |   | Α |                                     |                         |  | EDLRKCTFIFIIGGPGSGKGTQCEKL VEKYGFTHLSTGELLREELASESER SKLIRDIMERGDLVPSGIVLELLKEA MVASLGDTRGFLIDGYPRE\VKQGE EFGRRIGDP\QLVIGKE\CSPDT\MTN RL\LQRSRSSLPVDDTTK\TMAKRLE AYYR\ASIPVIAYYETKTQLHKINAE GTPEDVFLQLCTAIDSIIF  |
| VVRLVSNASMLVSM<br>LPRGATVVELFPYAV<br>TLAMLPGHGTSSM   |   |   |   |                                     |                         |  | KLLSPKQPLLRAQLKTLVRLLCFSH AFVGLSKITTWYQYGFVQTQGPKA NILVSGNEIRQFARFMTEKLNVSHT GVPLGEEYILVFSRTQNRLILNEAEL LLALAHEFQMKTVTV\PWRTTPLTD VVRLVSNASMLVSMHGAQLVTTLF LPRGATVVELFPYAVNPDHYTPYK TLAMLPGHGTSSM NEELMPKGRLYPPLANIQEVSINIAI   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|---|
|   |   |     |                                     |   |  | KVTEYLYANKMGFPDTQEPE\DKA<br>KYVK/EKGTWAEWNMDSLLPDV\Y<br>EWPEICNQAPPVNTEIEALPLINTFV<br>CSRGTPFFQTRKR   |
| 3590  | 9087                                    | A   | 3861                                | 1411  | 1799   | GYLQFSFSFFLFFFFFFFRWSLTLS PRLECSSVISTHCNLRLPGSSDSRAS ASQVAGTTGAHHHARLIVCV\LVER VFHHVGQAGLEVLTSGGPPTSASQS ARITGMSHHTRPVICSFQFSDLPHEY F   |
| 3591  | 9088                                    | A   | 3862                                | 1   | 1007   | MDGGHLFSNLTGKEEVIHKGAKLH PNGYRMAQGSETLVARGGPCRSVE PSAASPQELRGWWEAQALKRWGL MGGVWVMEVDPSWLGAISAIVSSS ASRLLKSVWHIPCPHFLLLRPQLKE AQRRKKQLEERCRVEESIGNAVLT WNNEILPNWETMWCSRKVRDLWW QGIPPSVRGKVWSLAIGNELNITHEL FDICLARAKERWRSLSTGGSEVENE GLCVAVCAQQGHVGVMGFGSDEP SAVSPCEKGKSLAAWVLIFVDFRVG LQKSFQKRKERESTKLQQLWSWCL MLTYFAAFEVFFEENLPKLFAHFKK NNLTPDIYLID/W*FRLLVGC |
| 3592  | 9089                                    | A   | 3863                                | 1   | 1857   |   |
| 3593  | 9090                                    | A   | 3864                                |   | 840  | GIPAADR\EASLELIKLDISRTFPNLCI<br>FQQGGPYHDMLHSILGAYTCYRPD<br>VGYVQGMSFIAAVLILNLDTADAFI<br>AFSNLLNKPCQMAFFRVDHGLMLT<br>YFAAFEVFFEENLPKLFAHFKKNNL<br>TPDIYLIDWIFTLYSKSLPLDLACRI<br>WDVFCRDGEEFLFRTALGILKLFED<br>ILTKMDFIHMAQFLT\RLPEDLPAEE<br>LFGPSIATIQMQSRNKKWAQVLTAL<br>QKDSREMREGKSVPPTLRLQREFAL<br>GTNQSPMPRPLCCFRLTPGQPRRTD<br>AL                          |
| 3594  | 9091                                    | A   | 3865                                | 3   | 288  | FFFEMESLYVT/RLNCSGTITISVHC NLCFPGSSDSPASASQIAGITGTRHH AQLILVFLVEMGFC/HISTKQMEVIH PPWPPKVLGLQVVTHDVL   |
| 3595  | 9092                                    | A   | 3866                                | 285   | 489  |   |
| 3596  | 9093                                    | A   | 3867                                | 3   | 425  | GSSDPPASAFQVAGSISVCHHTQLIF<br>VFLVEVEFHHVSQASLQL/RDLSLPS<br>SWDYRRPPPRPANFFVFLVEMGFH<br>HLNKAIIKSFACNEIQPLSAVSVARA<br>GWGVFEYVSVYFLCSNSDYFSSNPS<br>IANWMREWPLRLSLF  |
| 3597  | 9094                                    | A   | 3868                                | 1   | 156  | APPHPAN\FAFLVEMEFHDVGQGDL<br>QLLASSDLPASASQSAGITGVSHCN<br>WI  |
| 3598  | 9095                                    | A   | 3869                                | 1   | 526  | LAESGEGLVLSGGSLRLP\CIASRFIF<br>SSYYMSGVRQAPGKGLEWVSFIR\A<br>TSVRGRFTMSRDESKNITYLQMKSL<br>RRGMFRGDLG\DWPGGDGHWGAL<br>RIWEPLWIFRCLWKMGLRLGASDG<br>VTEPGGLGSHIWTRCLNKPGVLVM  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|------------------------------------|---|
|   |   |     |                                     |   |                                    | AEECVSGAVSVGLQDRCTAANRAI<br>FSLEL   |
| 3599  | 9096                                    | A   | 3870                                | 2   | 353                                | TOBEE   |
| 3600  | 9097                                    | A   |                                     | 136   | 315                                | FKYVLSFLFLASGDGESLDEDSEFTL<br>ARDFEIGHFF\RERIVPRAVLYFTGE<br>AIEDDDNV  |
| 3601  | 9098                                    | A   | 3872                                | 132   | 1552                               | GDKNIQMADHSFSDGVPSDSVEAA KNASNTEKLTDQVMQNPRVLAALQ ERLDNVPHTPSSYIETLPKAVKRRIN ALKQLQVRCAHIEAKFYEEVHDLE RKYAALYQPLFDKRREFITGDVEPT DAESEWHSENEEEEKLAGDMKSKV VVTEKAAATAEEPDPKGIPEFWFTIF RNVDMLSELVQEYDEPILKHLQDIK VKFSDPGQPMSFVLEFHFEPNDYFT NSVLTKTYKMKSEPDKADPFSFEGP EIVDCDGCTIDWKKGKNVTVKTIK KKQKHKGRGTVRTITKQVPNESFFN FFNPLKGKSVASGDGESLDEDSEFT LASDFEIGHFFRERIVPRAVLYFTGE AIEDDDNFEEGEEGEEELEGDEEG EDEDDAE\FNPKVLIFVLLIIHTFSRR DPSQPAECKQQYEAEAGAWQTGCR DSRPVGGASVLAAAQSRGQSLLHL TRFQVHDFHFHFSFFLIILINLYSGN |
| 3602  | 9099                                    | A   | 3873                                | 171   | 324                                |   |
| 3603  | 9100                                    | A   | 3874                                | 3   | 383                                |   |
| 3604  | 9101                                    | A   | 3875                                | 2   | 314                                | FFFFISALKALFAFLQILLFQVNVLRI<br>TAHIVISFINLLSVTPSKAFLLLAFIF<br>CREDYSFTAYATISYLKIGPKANLL<br>NN\EAYVIT\MQVTKSTQNSFRVNG<br>Y   |
| 3605  | 9102                                    | A   | 3876                                | 3   | 319                                | TESRSVPQLGVQWRDLGSLQPPPPG<br>FTRFSCLSLPSSWDYRHTPPRPANFL<br>\FFLVETGFRHVGQTGLELLTSGDPP<br>ASASQSAGILCVLCTSTLGNHREHI<br>YRMV  |
| 3606  | 9103                                    | A   | 3877                                | 118   | 1341                               |   |
| 3607  | 9104                                    | A   | 3878                                | 1   | 214                                | GFTSSLACMQMGEMFMGFTCQT\H<br>LLALGCALFTAYLGVGMANFMAE<br>GTCERRIVGKKKASITKDHQQRRI   |
| 3608  | 9105                                    | A   | 3879                                | 1   | 176                                | MRTFALLTAMLLLVA/HAQAEPLQ<br>ARADEAAAQEQPGADDQEMAHAF<br>TWHESAALPLSA   |
| 3609  | 9106                                    | A   | 3880                                | 3   | 125                                | AASTFLFPNLKNSLRG\SLRTFSSVT<br>NVRKTALTWLNSQDI   |
| 3610  | 9107                                    | A   | 3881                                | 1169  | 1512                               | YTQKNWHLFCFIFLRWSFVLVAQP<br>GVQWCNLSSLQPLPPRFR*FSCLSLL<br>SSWDYRCAPPRPANF/SVFLVETGF<br>HHVGQADLELLTSGDLPTSASQSAG<br>ITGVSHCTWPDILYEI  |
| 3611  | 9108                                    | A   | 3882                                | 43  | 347                                | AGVQ*CDLG*LQLLPLGFK*FSCLSL<br>PSSWDYRRLPPRPANF\*FLVETGFH<br>HVGQADLELLTSGDSPASASQSAGI<br>TGMSHRAGPI*KSFLKYSTNKLRTT  |
| 3612  | 9109                                    | A   | 3883                                | 10900   | 11295                              | KPWVNETGKLFQDSYSISSHIHLSGF<br>SFPSFFSETESCSVTQAGVQWHDLS   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |    | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----|-------------------------------------|-------------------------|--|--|
|   |   |    |                                     |                         |  | SLKPLPPGFKQFSCLSLPSSWDYRR<br>VPTRPANF/SVFLLETEFHRVSQDGL<br>DRLT/S/GDPPSSASQSAGITGVSHRA<br>RPHSPHF  |
| 3613  | 9110                                    | A  | 3884                                | 3                       | 227  | RFSCLSLSSSWDYRAP\PPRLANFCI<br>LVETGFHHAGQTGLELLTSGDPPAS<br>ASEIAGITGMSHHTQPGQLLWECC  |
| 3614  | 9111                                    | A  | 3885                                | 2                       | 296  | KWSSALVAYAGVTWHHLGSLRSPP<br>PGFKRFCCLSLPSSWDYRHAPPPPA/<br>NFFVFLVKTGFLHVGQAGLELPISG<br>DPPALAPKQSAWIRGVSHRAQPQN  |
| 3615  | 9112                                    | A  | 3886                                | 1 ,                     | 162  | LGGLVFPSEVVCK/RKLDGMQLIKV<br>HLDKAQQNNVENKAETFSGVCKK<br>HRDLMA   |
| 3616  | 9113                                    | A  | 3887                                | 2                       | 474  |  |
| 3617  | 9114                                    | A  | 3888                                | 2                       | 592  | STGKFSQEKAMFSSSAKIVKPNGEK PDEFESGISQALLELEMNSDLKAQL RELNITAAKEIEVGGGRKAIIIFVPVP QLKSFQKIQVRLVRELEKKFQWES MSVFIAQ\RRILP\KPTRKSRTKNKQ KRPRSRTLTAVHDAILEDLVFPSEIV GKRIRVKLDGSRLIKVHLDKAQQN NVEHKVETFSGVYKKHRDLMA  |
| 3618  | 9115                                    | A  | 3889                                | 1                       | 93   | GFTMLP/RLVLNSWVQMICLPWPPK<br>MLSLQA  |
| 3619  | 9116                                    | A, | 3890                                | 1                       | 252  | PTLEQYAMRAFADALEVIPMALSE<br>NSGMNPIQTMTEVRAR/QDMKQQH<br>VIETLIGKKQQISLATQMVRMILKID<br>DIRKPGESEE   |
| 3620  | 9117                                    | В  | 3891                                | 18                      | 1121   | MASMGTLAFDEYGRPFLIIKDQDRK SRLMGLEALKSHIMAAKAVANTMR TSLGPNGLDKMMVDKDGDVTVTN DGATILSMMDVDHQIAKLMVELSK SQDDEIGDGTTGVVVLAGALLEEA EQLLDRGIHPIRIADGYEQAARVAIE HLDKISDSVLVDIKDTEPLIQTAKTT LGSKVVNSCHRQMAEIAVNAVLTV ADMERRDVDFELIKVEGKVGGRLE DTKLIKGVIVDKDFSHPQMPKKVED AKIAILTCPFEPPKPKTKHKLDVTSV EDYKALQKYEKEKFEEMIQQIKETG ANLAICQWGFDDEANHLLLQNNLP AVRWVGGPEIELIAIATGGRIVPRFS ELTAEKLGFAGLDKRISFGDT* |
| 3621  | 9118                                    | A  | 3892                                | 1                       | 282  | LPSSTHTIPGYP\NPLHPRPFPSSRLPP<br>GIIGGEYDQRPTLPYVGDPISSLIPGP<br>GETPSQFPPLRPRFDPV/GPNDRFPF<br>RPSRGRPTDGRLSFM   |
| 3622  | 9119                                    | A  | 3893                                | 3                       | 166  | PRPFPKSRLPPGIIGGEYD\QRPNPILP<br>\GRGGPNDRFPF\RPSRGRPTDGRLS<br>FM   |
| 3623  | 9120                                    | A  | 3894                                | 101                     | 1926   | SPVRGRRRLGRELLGPAAVPVAAS<br>GSRPLGPPAAVMRLRVRLLKRTWP<br>LEVPETEPTLGHLRSHLRQSLLCTW<br>GYSSNTRFTITLNYKDPLTGDEETL<br>ASYGIVSGDLICLILQDDIPAPNIPSS<br>TDSEHSSLQNNEQPSLATSSNQTSM   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   | sequence   | QDEQPSDSFQGQAAQSGVWNDDS MLGPSQNFEAESIQDNAHMAEGTG FYPSEPMLCSESVEGQVPHSLETLY QSADCSDANDALIVLIHLLMLESGY IPQGTEAKALSMPEKWKLSGVYKL QYMHPLCEGSSATLTCVPLGNLIVV NATLKINNEIRSVKRLQLLPESFICK EKLGENVANIYKDLQKLSRLFKDQ LVYPLLAFTRQALNLPDVFGLVVLP LELKLRIFRLLDVRSVLSLSAVCRDL FTASNDPLLWRFLYLRDFRDNTVR G\QDTDWKELYRKRHIQRKESPKGR \FVMLLPSSTHTIPFYPNPLHPR\PFP\ SSRL\PPGI\IGGEYDPKTNTFPMLGD PISSLIPWVLGETPQPSFPPTETHALN PSWPPISRDPNPQSCPGAEGGPPN/R TRFPPLRPQPGGRANLMAGLVISCG LDLLIFISWSLPFVFCFLNYRCQRPW GADLRVLFS |
| 3624  | 9121                                    | A | 3895                                | 2   | 442  | LSQLCGDPQRFDDFLRAYVEKYKF TSVVAQDLLDSFLSFFPELKEQSVD CRAGPPLAEPDLSQGSSLTRPVEAL FQL/WTAEPLDQAAASASAIDISKW RTFQTALFLDRLLDGSPLPQEVVMS LSKCYSSLLDSMNAEIRIRWLQIV  |
| 3625  | 9122                                    | A | 3896                                |   | 1035   | GEFLVIDVIHEVAHSWFGNAVTNAT WEEMWLSEGLATYAQRRITTETYG AAFTCLETAFRLDALHRQMKLLGE DSPVSKLQVKLEPGVNPSHLRNLFT YEKGYCFVYYLSQLCGDPQRFDDF LRAYVGE\YKFTSVVAQDLLDSFLS FFPELKEQSVDCRAGLEFERWLNAT GPPLAEPDLSQGSSLTRPVEALFQL WTAEPLDQAAASASAIDISKWRTFQ TALFL\DRLLDGSPLPQEVVMSLSK CYSSLLDSMNAEIRIRWLQIVVRND YYSLT/FHRVRRFPGRARCHACYTIP LYEDLCTGALKSFALEVFYQTQGRL HPNLRRAIQQILSQGLGFQHRARP   |
| 3626  | 9123                                    | A | 3897                                | 2   | 912  | CSRSSRTGGWWPAPCSAASRRPTPG PAAAAAATTD/VVTAGCGFGKDFR KGLLKKGACYGDDACFVARHRSA DVLGVADGVGGWRDYGVDPSQFS GTLMRTCERLVKEGRFVPSNPIGILT TSYCELLQNKVPLLGSSTACIVVLD RTSHRLHTANLGDSGFLVVRGGEV VHRSDEQQHYFNTPFQLSIAPPEAE GVVLSDSPDAADSTSFDVQLGDIILT ATDGLFDNMPDYMILQELKKLKNS NYESIQQTARSIAEQAHELAYDPNY MSPFAQFACDNGLNVRGGKPDDIT VLLSIVAEYTD  |
| 3627  | 9124                                    | A | 3898                                | 2   | 220  | YMSKKFSALLQSQERNCLIIINWCSS<br>LCLRVRLYLRQVTVIPRICKVSD\SP<br>CAPEADAMFAFNADGVGDAKG  |
| 3628  | 9125                                    | A | 3899                                | 1   | 346  | SANATTKTSETNHTSRPRLKNVDRS<br>TAQQLAVTVGNVTVIITDFK\EKTRS<br>SS\TSSSTVTS\SAGS\EQQN\QSSSGV  |

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|---|---|---|-------------------------------------|-------------------------|--|--|
|   | •                                       |   | ļ                                   |                         |  | QRAPDKGLPPRSLPTPKGDMS\AVN<br>DEIFPEIATWNCEKL   |
| 3629  | 9126                                    | A | 3900                                | 76                      | 368  |  |
| 3630  | 9127                                    | A | 3901                                | 1                       | 1182   | MFAKGRGSAVPSDGQAWEKLASY VYEYLLHVRVQKSAETFLSEIRWEK NITLGEPPGFLHSWWCVFGDLYCA APQRRDTCEHSSEAKAFHDYSAAA APSPVLGNIPPNDGMPGGPIPPGFFQ GPPGSQPSPHAQPPPHNPSSMMGPH SQPFMSPRYAGGPRPP\IRMGNQPPG GVPG\TQPLLP\NSMDPTRQQGHP\N MGGSMQRMNPSPRPLGPMGPRPHR ITGSGMRPPPNSLGPA\MP\GINMGP GAGRPWPNPNSANSIPYSSSSPGTY VGPPGGGGPPGTPIMPSPADSTNSS DNI\YTMI\NPV\PPGGSRSNFQMGPG STGPMDSMGGMEPHHMIG\SLGSG DIDGLPKIFPNNISGISNPPGTPRDDG  |
| Į   | İ                                       |   |                                     | }                       |  | ELGGNFLHSFQNDNYSPSMTMSV  |
| 3631  | 9128                                    | A | 3902                                | 2                       | 470  | IPTFGLPGSIQSDNGP\SFISQITQQVS<br>QSLGIQWRLHIPCWPQTSGKVERAN<br>GILKAQLTKLTLEVQKPWDL\LLPH<br>RHWESIRRP/GPKGTLLSFSSIWSLIY<br>GTPFPLT\NRPPSNSQLGGIPSQQSSL<br>MEVIFLWPTRPTRAFPKPHGGGLPIP<br>K  |
| 3632  | 9129                                    | A | 3903                                | 69                      | 523  | PLGCASSQSISASRNTLCTTASSCCP<br>QVLAHS\KAAEYMTRWKVQQMPH<br>SQDRALQSVFCAPFHS**LVALPTG<br>HR*MTPAQFSECFQATSGGSD*DPF<br>LAPSFL\VPGLPVAPGLLLPLGPVHS<br>RATMEEGQATHEELTVFIGLRPGVR<br>GS   |
| 3633  | 9130                                    | A | 3904                                | 101                     | 1469   | RTHPTFPHPGTGPTSAPPSGALEGTA GTITSNEWSSPTSPEGSTASGGSQAL DKPIDNDGEGVWSPDIEQSFQEALA IYPPCGRRKIILSDEGKMYGRNELIA RYIKLRTGKTRTRKQVSSHIQVLAR RKAREIQAKLKDQAAKDKALQSM AAMSSAQIISATAFHSSMRLARGPG RPAVSGFWQGALPGQAETSHDVKP FSQQTYAVQPPLPLPGFESPAGPAPS PSAPPAPPWQGR\SVASSKLWMLEF SAFLEQQQDPDTYNKHLFVHIGQSS PSYLRPYLEAVDIRQIYDKFPEKKG GLKDLFERGPSNAFFLVKFWADLN TNIEDEGSSFYGVSSQYESPENMIIT CSTKVCSFGKQVVEKVETEYARYE NGHYSYRIHRSPLCEYMINFIHKLK HLPEKYMMNSVLENFTILQVVTNR DTQETLLCIAYVFEVSASEHGAQHH IYRLVKE |
| 3634  | 9131                                    | A | 3905                                | 1                       | 1290   | <u> </u>   |
| 3635  | 9132                                    | A | 3906                                | 2                       | 270  | ISLADLKEGPHTHLKPPDYSVAVQR<br>SKMMHNSLSRLPPASLSSNLVACVP<br>SKIVTQPQRHNLQPFHPKLGDVTDA<br>DSEED\ENEQVSAV  |
| 3636  | 9133                                    | A | 3907                                | 2                       | 288  | RWGLALSLR/AGAQWFHHGSLQPQ   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | Me<br>tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----------------|-------------------------------------|---|--|---|
|   |   |                |                                     |   |  | PPMLKSSSRLSLPSSRNHRHTQPCPA<br>NFFIFVEMGFHHVAQAGLELLSS\LT<br>VWASQSAGITGVSHRTHPLLS   |
| 3637  | 9134                                    | A              | 3908                                | 3   | 222  | FFFETESRSVT\RLECSGTISAHCKLH<br>LPGSCHSPASASRVAGTTGAHCHTQ<br>RIF\VEMGFHRVSQDGLDLKNL  |
| 3638  | 9135                                    | A              | 3909                                | 3   | 175  | GTSPKDCEVRDFCPSEGLYST*WGG<br>SILPSLDT/FKKMWVSKKKYEEDGA<br>RSIHRKTF  |
| 3639  | 9136                                    | A              | 3910                                | 2   | 533  | RAAEFFETFNVPALFISMRAVLSLY ATGRTTGVVLDSEDGVTHAVPIYE GFAMPHSIMCIDIADRDVSRF\LR\L YLRK\EGYDFHSS\SEFEIVKAIKERA CYLSINP\QKDETLETEKAQYYLPD GSTIEISAPQERLYSTWIGGSILASLD TFKKMWVSKKEYEEDGARSIHRKT F  |
| 3640  | 9137                                    | A              | 3911                                |   | 1213   | EFGALRRTRLGSSFPRRRDSSAMES YDVIANQPVVIDNGSGVIKAGFAGD QIPKYCFPNYVGRPKHVRVMAGAL EGDIFIGPKAEEHRGLLSIRYPMEHG IVKDWNDMERIWQYVYSKD\QLQT F\SEEHPVLLTEAPLNPRKNRERAAE VFFETFNVPALFISMQAVLSLYATG R\TTGVV\LDSGDGVTHAVPIYEGFA MPHSIMRIDIAGRDVSRFLRLYLRK EGYDFHSSSE\FEIVKAIKERACYLF HKTPKRD\ETLETEKASVTTWLDGS TIEIGPFR\FRAP\ELLFGPRI*LEKESE GI\HEVPGVRPFRKSDMGPAGARLF SNIVL/SQGGSTPVQKFSSLPISGFGD RLLC\*VKKL\APKDVKIRISAPQERH VYPRGLGGSILASLDT\FKKMWVLQ KGDMR*DGSTIEIGPFRIPGPLSCSSG PEFDWKRKVKASHEVPGVRPFRKS DMGPAGARLFSNIVLFREALPLFKS SPLCPFQVLVTGSFVIVKKLSSKRCE DQDICTSGETCISTWIGGLHPCLPGH HLRRCGCSKKEI |
| 3641  | 9138                                    | A              | 3912                                | 2   | 262  | LEKRSHSVT\KLGYSGVIIAHCSLNF<br>LSSSQPPTSASQTAGTTGICHSTQLIF<br>KIFLVEMG/LHYVAQAGLDLLGSSN<br>VEPPKVLLGL  |
| 3642  | 9139                                    | A              | 3913                                | 1379  | 2175   | TTAGIQMPIKAPGVLPQTPASGGST AT*KNAQEQKRVL*HL/QPVVLLPD VETPSEEDCMFGNGKGYRGKRATT VTGTPCQDWAAQEPHRHSIFTPETN PRAGLEKNYCRNPDGDVGGPWCY TTNPRKLYDYCDVPQCAAPSFDCG KPQVEPKKCPGRVVGGCVAHPHSW PWQVSLRTRSPRPSSYKVILGAHQE VNLEPHVQEIEVSRLFLEPTRKDIAL LKLSSPAVITDKVIPACLPSPNYVVA DRTECFITGWGETQEHFYFN   |
| 3643  | 9140                                    | A              | 3914                                | . 1   | 387  | TPEKEPPLWHAEFTKEELVQKLSST<br>TKSADQLNG\LLRETEAT\HAVLME<br>QIKLLKSEIRRLERNQEESAANVEH<br>LKNVLLQFIFLKPGSERESLLPVINT   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | MLQLSPEEKGKLAAVAQGLQETSIP<br>KKK  |
| 3644  | 9141                                    | A | 3915                                | 360                     | 885  | NVFVLLEANQRTSTVTLATVSASGQ<br>MPSTEFGGLDSSIQKLIAIAHFILNH<br>RELGFLEKASSKSTLGFSPASDETFG<br>PVSDHIIWGWQTSWDYFVSDDGRT<br>A*L*QGNIFSCGLQEQPRHFYFLNM<br>RF/DDSLLGVHPG*PCRMKALGTSP<br>SSGQQSTPTLGISRCLHRSAFQTLF  |
| 3645  | 9142                                    | A | 3916                                | 1669                    | 4914   |   |
| 3646  | 9143                                    | A | 3917                                | 1379                    | 2175   | TTAGIQMPIKAPGVLPQTPASGGST AT*KNAQEQKRVL*HL/QPVVLLPD VETPSEEDCMFGNGKGYRGKRATT VTGTPCQDWAAQEPHRHSIFTPETN PRAGLEKNYCRNPDGDVGGPWCY TTNPRKLYDYCDVPQCAAPSFDCG KPQVEPKKCPGRVVGGCVAHPHSW PWQVSLRTRSPRPSSYKVILGAHQE VNLEPHVQEIEVSRLFLEPTRKDIAL LKLSSPAVITDKVIPACLPSPNYVVA DRTECFITGWGETQEHFYFN |
| 3647  | 9144                                    | A | 3918                                | 1                       | 387  | TPEKEPPLWHAEFTKEELVQKLSST<br>TKSADQLNG\LLRETEAT\HAVLME<br>QIKLLKSEIRRLERNQEESAANVEH<br>LKNVLLQFIFLKPGSERESLLPVINT<br>MLQLSPEEKGKLAAVAQGLQETSIP<br>KKK   |
| 3648  | 9145                                    | A | 3919                                | 360                     | 885  | NVFVLLEANQRTSTVTLATVSASGQ<br>MPSTEFGGLDSSIQKLIAIAHFILNH<br>RELGFLEKASSKSTLGFSPASDETFG<br>PVSDHIIWGWQTSWDYFVSDDGRT<br>A*L*QGNIFSCGLQEQPRHFYFLNM<br>RF/DDSLLGVHPG*PCRMKALGTSP<br>SSGQQSTPTLGISRCLHRSAFQTLF  |
| 3649  | 9146                                    | A | 3920                                | 1669                    | 4914   | 1 o 4 4 o 1 1 2 o lo le Camerin (1 El   |
| 3650  | 9147                                    |   | 3921                                | 1                       | 246  | FLETEFHSVAQAGVQWCHLGSLQP<br>PPPGFKQLS\CLSLPSSWDYRGTPPY<br>LANFCIFSRDGVSLCWPGWSQTPDL<br>KQSSGNL  |
| 3651  | 9148                                    | A | 3922                                | 10                      | 476  | DRVLLSVAQAGLQWRDLGSLQPPP P/GFKRFSCLSLPNSWDYRCVPPCLA NFFVFLVETGFHHVGQAGLELLTSG DPPLPQPPKVLGAGITGMSHHTWLI SLIFYQTKWRQTAIASVGIPGSPLCH PLPLIRKGVAGKAVLCPRKDGHTH KTQLRP  |
| 3652  | 9149                                    | A | 3923                                | 2                       | 465  | ARARADSARAARAEFEDIMKRNRA ISSSPISKAVSGASAGDYSDAIETLLT AIAVIKQSRVAK\DERCRVLISSLKD CLHG\IEGQVPTVWGAQLGALSRKR HPFPGERSP\SRSRETSRRHRDLLHN EDR\HDDYFQERNREHERHRDRER DRHH  |
| 3653  | 9150                                    |   | 3924                                |                         | 218  | LPPPLSNIHSTLSTPFLPPPAPL/SP/YP<br>SRASPPSTYSPLPTPPPLPTSQPSTPT<br>LPLPTPPCSTPSGQALFF  |
| 3654  | 9151                                    | A | 3925                                | 1379                    | 2175   | TTAGIQMPIKAPGVLPQTPASGGST   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | AT*KNAQEQKRVL*HL/QPVVLLPD<br>VETPSEEDCMFGNGKGYRGKRATT<br>VTGTPCQDWAAQEPHRHSIFTPETN<br>PRAGLEKNYCRNPDGDVGGPWCY<br>TTNPRKLYDYCDVPQCAAPSFDCG<br>KPQVEPKKCPGRVVGGCVAHPHSW<br>PWQVSLRTRSPRPSSYKVILGAHQE<br>VNLEPHVQEIEVSRLFLEPTRKDIAL<br>LKLSSPAVITDKVIPACLPSPNYVVA<br>DRTECFITGWGETQEHFYFN   |
| 3655  | 9152                                    | A | 3926                                | 1   | 387  | TPEKEPPLWHAEFTKEELVQKLSST<br>TKSADQLNG\LLRETEAT\HAVLME<br>QIKLLKSEIRRLERNQEESAANVEH<br>LKNVLLQFIFLKPGSERESLLPVINT<br>MLQLSPEEKGKLAAVAQGLQETSIP<br>KKK  |
| 3656  | 9153                                    | A | 3927                                | 360   | 885  | NVFVLLEANQRTSTVTLATVSASGQ<br>MPSTEFGGLDSSIQKLIAIAHFILNH<br>RELGFLEKASSKSTLGFSPASDETFG<br>PVSDHIIWGWQTSWDYFVSDDGRT<br>A*L*QGNIFSCGLQEQPRHFYFLNM<br>RF/DDSLLGVHPG*PCRMKALGTSP<br>SSGQQSTPTLGISRCLHRSAFQTLF   |
| 3657  | 9154                                    | A | 3928                                | 1669  | 4914   |  |
| 3658  | 9155                                    | A | 3929                                | 1   | 1542   |  |
| 3659  | 9156                                    | A | 3930                                | 3   | 1771   |  |
| 3660  | 9157                                    | A | 3931                                | 2   | 1869   | RLVVVEAKMAAQAAAAQAAAA QAAQAEAADSWYLALLGFAEHFRT SSPPKIRLCVHCLQAVFPFKPPQRIE ARTHLQLGSVLYHHTKNSEQARSH LEKAWLISQQIPQFEDVKFEAASLLS ELYCQENSVDAAKPLLRKAIQISQQ TPYWHCRLLFQLAQLHTLEKDLVS ACDLLGVGAEYARVVGSEYTRALF LLSKGMLLLMERKLQEVHPLLTLC GQIVENWQGNPIQKESLRVFFLVLQ VTHYLDAGQVKSVKPCLKQLQQCI QTISTLHDDEILPSNPADLFHWLPKE HMCVLVYLVTVMHSMQAGYLEKA QKYTDKALMQLEKLKMLDCSPILS SFQVILLEHIIMCRLVTGHKATALQE ISQVCQLCQQSPRLFSNHAAQLHTL LGLYCVSVNCMDNAEAQFTTALRL TNHQELWAFIVTNLASVYIREGNRH QEVVLYSLLERINPDHSFPVSSHCL RAAAFYVRGLFSFFQGRYNEAKRF LRETLKMSNAEDLNRLTACSLVLL GHIFYVLGNHRESNNMGGYAMQL ASKIPDMSVQLWSSALLRDLNKAC GNAMDAHEAAQMHQNFSQQLLQD HIEACSLPEHNLITWTDGPPPVQFQ AQNGPNTSLASLL |
| 3661  | 9158                                    | A | 3932                                | 2   | 614  | VGOVDVVV VVGO - DDDV   |
| 3662  | 9159                                    | A | 3933                                | 1   | 4992   | VSSNNVLLNSQADDRVVINKPESAG<br>FRDVGSEEIQDAENSAKTLKEIRTLL<br>MEAENMALKRCNFPAPLARFRDIS<br>DISFIQSKKVVCFKEPSSTGVSNGDL<br>LHRQPFTEESPSSRCIQKDIGTQTNL  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop<br>codon; /=possible nucleotide deletion; \=possible<br>nucleotide insertion)  |
|---|---|-------------------------------------|-------------------------|--|---|
|   |   |                                     |                         | sequence   | KCRRGIENWEFISSTTVRSPLQEAES KVSMALEETLRQYQAAKSVMRSEP EGCSGTIGNKIIIPMMTVIKSDSSSD ASDGNGSCSWDSNLPESLESVSDVL LNFFPYVSPKTSITDSREEEGVSESE DGGGSSVDSLAAHVKNLLQCESSL NHAKEILRNAEEEESRVRAHAWNM KFNLAHDCGYSISELNEDDRRKVEE IKAELFGHGRTTDLSKGLQSPRGMG CKPEAVCSHIIIESHEKGCFRTLTSE HPQLDRHPCAFRSAGPSEMTRGRQ NPSSCRAKHVNLSASLDQNNSHFK VWNSLQLKSHSPFQNFIPDEFKISKG LRMPFDEKMDPWLSELVEPAFVPP KEVDFHSSSQMPSPEPMKKFTTSITF SSHRHSKCISNSSVVKVGVTEGSQC TGASVGVFNSHFTEEQNPPRDLKQK TSSPSSFKMHSNSQDKEVTILAEGR RQSQKLPVDFERSFQEEKPLERSDF TGSHSEPSTRANCSNFKEIQISDNHT LISMGRPSSTLGVNRSSSRLGVKEK NVTITPDLPSCIFLEQRELFEQSKAP RADDHVRKHHSPSPQHQDYVAPDL PSCIFLEQRELFEQCKAPYVDHQMR ENHSPLPQGQDSIASDLPSPISLEQC QSKAPGVDDQMNKHHFPLPQGQD CVVEKNNQHKPKSHISNINVEAKFN TVVSQSAPNHCTLAASASTPPSNRK ALSCVHITLCPKTSSKLDSGTLDERF HSLDAASKARMNSEFNFDLHTVSS RSLEPTSKLLTSKPVAQDQESLGFL GPKSSLDFQVVQPSLPDSNTITQDL KTIPSQNSQIVTSRQIQVNISDFEGHS NPEGTPVFADRLPEKMKTPLSAFSE KLSSDAVTQITTESPEKTLFSSEIFIN AEDRGHEIIEPGNQKLRKAPVKFAS SSSVQQVTFSRGTDGQPLLLPYKPS GSTKMYYVPQLRQIPPSPDSKSDTT VESSHSGSNDAIAPDFPAQVLGTRD DDLSATVNIKHKEGIYSKRVVTKAS LPVGEKPLQNENADASVQVLITGDE NLSDKKQQEIHSTRAVTEAAQAKE KESLQKDTADSSAAAAAEHSAQVG DPEMKNLPDTKAITQKEEIHRKKTV PEEA WPNNKESLQINIEESECHSEFE NTTRSVFRSAKFYIHHPVHLPSDQDI CHESLGKSVFMRHSWKDFFQHHPD KHREHMCLPLPYQNMDKTKTDYT RIKSLSINVNLGNKEVMDTTKSQVR DYPKHNGQISDPQRDQKVTPEQTT QHTVSLNELWNKYRERQRQRQPE LGDRKELSLVDRLDRLAKILQNPIT HSLQVSESTHDDSRGERSVKEWSG RQQRNKLQKKKRFKSLEKSHKNT |
|   |   |                                     |                         |  | GELKKSKVLSHHRAGRSNQIKIEQI<br>KFDKYILSKQPGFNYISNTSSDCRPS<br>EESELLTDTTTNILSGTTSTVESDILT<br>QTDREVALHERSSSVSTIDTARLIQA  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  FGHERVCLSPRRIKLY\SSITNOOR\R   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | YLEKRSKH\SKESAGLTGHPLVTSE<br>HTRRRHIQPPTSATACRQPLMTFCF<br>YGFAYSGPFI  |
| 3663  | 9160                                    | A | 3938                                | 2   | 354  | NRILVITSKAGEVIKHGDLRCVRDE<br>GMPIYKAPLEKGILIIQFLVIFPEKPL<br>ALSGKSFLQLEALLPP\RQKVRITDD<br>MDQVELKEFCPNEQNWRQHREAY<br>EEDEDGPQAGVQFQTA   |
| 3664  | 9161                                    | A | 3939                                | 204   | 374  | DHGFLIPLTQGDQKGPPRVHPL*AC<br>YHWNQREKVISSCIGCICMSQIKDP<br>LVKKKKK   |
| 3665  | 9162                                    | A | 3940                                | 39  | 385  | AGVQWRDLSSPQPPPPGFKRVSCLS<br>LPSSWDYRPQPRLANFC/DFLVEMG<br>FCHVDQ\AGLELLTSGDPPASASQS<br>AGITGVSHRTQPCLLFLKTKTWGK<br>WEKDGMFWEMNGAQDQQE   |
| 3666  | 9163                                    | A | 3941                                | 1   | 200  | FETGSYSVT\RLVFSVQISAHCNLCL<br>PGPSDPPTSASEVVGTSVCHR\TQLI<br>VIYPLQLPKLFRLQV   |
| 3667  | 9164                                    | A | 3942                                | 2   | 458  | LFYGVYFLFPLNSCILFVSFTVNHLQ<br>IFFFGGGMKSWSVRRLECSGVILAH<br>CNLRLPGSSDSPASASRVAGTTGTC<br>HR\ARLIFVFLVEMG\FHHVG/RRDG<br>LGSPDLVIHPPR\TPKGVGGLQGVSH<br>CGPGPSPQGFYLKIKELGSSQGGEQ<br>FP   |
| 3668  | 9165                                    | A | 3943                                | 1   | 2499   |   |
| 3669  | 9166                                    | A | 3944                                | 855   | 2479   | PGGSGPGFPTLEGSSKAGRELGIGY EPGSSGVGAPLTPHKKMKKRKELN ALIGLAGDSRRKKPKKGPSSHRLLR TEPPDSDSESSSEEEEEFGVVGNRSR FAKGDYLRCCKICYPLCGFVILAAC VVACVGLVWMQVALKEDLDALKE KFRTMESNQKSSFQEIPKLNEELLSK QKQLEKIESGEMGLNKVWINITEM NKQISLLTSAVNHLKANVKSAADLI SLPTTVEGLQKSVASIGNTLNSVHL AVEALQKTVDEHKKTMELLQSDM NQHFLKETPGSNQIIPSPSATSELDN KTHSENLKQDILYLHNSLEEVNSAL VGYQRQNDLKLEGMNETVSNLTQR VNLIESDVVAMSKVEKKANLSFSM MGDRSATLKRQSLDQVTNRTDTVK IQSIQKEDSSNSQVSKLRE*LQLISAL TNK\PESNRPPETADEEQVESCTSKP SALPKFSQFLGDPVEKGCPKLRTYS P*QGVSKH*KIFQDLFR\KTGQDV\D GKLTYQEIWTSLGSAMPEP\ESLRAF D\SDGDGRYSFLELRVALGI |
| 3670  | 9167                                    | A | 3945                                | 336   | 519  | AALPCEPAFSPLQEVQRGLQDRGQ<br>NQTQRPFFL\NVVQA\VSQEG\ACV\<br>YAVSELRKEWGRPQ  |
| 3671  | 9168                                    | A | 3946                                | 252   | 2104   | LCASSCPFICPPIRPSVCPPAAPLLLG<br>CRAMARGYGATVSLVLLGLGLALA<br>VIVLAVVLSRHQAPCGPQAFAHAA<br>VAADSKVCSDIGRAILQQQGSPVDA  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|---|--|
|   |   |   |                                     |                         |   | TIAALVCTSVVNPQSMGLGGGVIFT IYNVTTGKVEVINARETVPASHAPS LLDQCAQALPLGTGAQWIGVPGEL RGYAEAHRRHGRLPWAQLFQPTIA LLRGGHVVAPVLSRFLHNSILRPSL QASTLRQLFFNGTEPLRPQDPLPWP ALATTLETVATEGVEVFYTGRLGQ MLVEDIAKEGSQLTLQDLAKFQPEV VDALEVPLGDYTLYSPPPPAGGAIL SFILNVLRGFNFSTESMARPEGRVN VYHHLVETLKFARGQRWRLGDPRS HPKLQNASRDLLGETLAQLIRQQID GRGDHQLSHYSLAEAWGHGTGTSH VSVLGEDGSAVAATSTINTPFGAMV YSPRTGIILNNELLDLCERCPWGSGT TPSPVSGDRVGGAPGRCWPPVPGE RSPSSMVPSILINKAQGSKLVIGGAG GELIISAVAQAIMSKLWLGFDLRAA IAAPILHVNSKGCVEYEPNFSQEVQ RGLQDRGQNQTQRPFFLNVVQ\AVS QEG\ACVYA\VSDL\RKSGEAARS |
| 3672  | 9169                                    | A | 3947                                | 2                       | 97  | GLGRWLT/PVIPTLWEAKKGRSPEV<br>RSSRPVKS  |
| 3673  | 9170                                    | A | 3948                                | 3                       | 308   | PEDSDEKSLSSSVVVHVRRPSRRVP<br>RMPRGSRSRTSRMAPPASRAPQMR<br>AAPRPAPVAQPP\QPCLYEIKQFLEC<br>AQNQGDIKLCEGFNEVLKQCRLAN<br>GLA   |
| 3674  | 9171                                    | С | 3949                                | 38                      | 154   | MXSNSFWSVPRTRVTSSSVRVSMR<br>CCYDFILCELIRIKS*   |
| 3675  | 9172                                    | A | 3950                                | 1                       | 192   | GSNAEP/ARPDLTY/QEP/QGTQPAQ<br>QQQPCLYEIKQFLECAQNQGDIKLC<br>VGFNEVLKQCRLANGLA   |
| 3676  | 9173                                    | A | 3951                                | 1                       | 254   | LMARMQTLKLAVLWASAIGHTWV<br>HAFTGAFSGGSNAEPARP/DITYRSL<br>YEIKQFLECAQNQGDIKLCEGFNEV<br>LKQCRLANGLA  |
| 3677  | 9174                                    | A | 3952                                | 1                       | 142   |  |
| 3678  | 9175                                    | A | 3953                                | 1                       | 325   | FFFEMESCSVAHAGVRWA/DLSSLQ<br>SPFPGFKRFSCLGLLSSWDYRRLPP<br>HPANF\YFLVDTGFHHVGQAGLELL<br>T/S/GDPPASASQSAGITGTSHRARPT<br>VNTFNRPPAS   |
| 3679  | 9176                                    | A | 3954                                | 3                       | 304   | HEGREKRRVLGAEAGGGRSCEIGV PLEWWRPLMRVRVRMCC\LMLML RWGASFAWYCCFLSFCNWL\SSEDT TGLMITFMLRISALLMRSLQNPEAM TLPW  |
| 3680  | 9177                                    | A | 3955                                | 3                       | 961   | LLLLNSRPRRRDRLVTLESWANDPD YLKRQVGFCAQWSLDNLFLKEGRQ LTYEKVNLSSIRAMLNSNDVSEYLK ISPHGLEARCDASSFESVCC\SFCVD AGVWDYEVTVVTSGVMQIGWATR DSTFLNHEGYGIGDDEYSCAYDGC RQLIWYNARSKPHIHPCWKEGDTV GFLLDLNEKQMIFFLNG/TPA/RPPEE QVFSSTVSGFFAAASFMSYQQCEFN  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | FGA\SPFKYPPSMKFSTFNDYAFLTA EEKIIL\PRHRRLALLKQVSIRETAGS LCCDEVADTQLKPCGHSDLCMDCA LQLETCPLCRKEIVSRIRQISHIS  |
| 3681  | 9178                                    | A | 3956                                | 4   | 101  | RQSLAMLSRLA\LNSWPQVILLPWP<br>PKVLGLQA   |
| 3682  | 9179                                    | A | 3957                                | 21  | 338  | HPVLAITLSIFIFVAFAYAEEELDEIQ P/CIMMKTLNKLGIEGMCLNSIKAIY /DKSNANFILNKEKLKAFFLRSGTRQ IRPNFQ/PLLFNIVLEVLAKEIRQEEEI KV   |
| 3683  | 9180                                    | A | 3958                                | 90  | 360  | ALICLVDIESGENSTTRPRFASHDQV<br>CIALLRTA\GILCLETFIDSPSHGSRH<br>FLFVLSSPPLTLFPLLHIYLLAVVVPI<br>VSPLLSLSDPP   |
| 3684  | 9181                                    | A | 3959                                | 1   | 424  | CGRRFSTRSDLTKHRRTDTG\EKPN\ RCELCGKRFTCVSNLNVHRRNHAG HKPHKCPECSKAFSVASKLALHRKT HLGERPAECARVGQVLQPQPAPLS QHQRGPHAPPAPLPPLPSSPAVGHC PQSFEGGRLEQEKAKGSL   |
| 3685  | 9182                                    | A | 3960                                | 153   | 328  | SIASYFTLVCHLLRKCHPRLGTVAH<br>TYNPSTLGGRGRWIMR\QEFETSLT\<br>NMVKPCRY   |
| 3686  | 9183                                    | A | 3961                                | 1   | 936  |   |
| 3687  | 9184                                    | A | 3962                                | 1   | 1023   |   |
| 3688  | 9185                                    | A | 3963                                | 15  | 337  | RINNTISWLIYVCKFCLSSFSIYLIIIIII IIFFETESHSVAQAGVQWRNLGSLQ PPPPRFKRFSCLSFPSSWDYRCPPPR PANFCIF\SRDGVSPCWPGWFRTPDL R  |
| 3689  | 9186                                    | A | 3964                                | 3   | 1105   | HASALTPVVCMLSAIAFSNVFEHYL GDDMKRENPPVEDSSDEDDKRNQG NLYDKAGKVRKHATEQEKTEEGLG PNIKSIVTMLMLMLLMMFAVHCTW VTSNAYSSPSVVLASYNHDGTRNIL DDFREAYFWLRQNTDEHARVMSW WDYGYHIAGMANRTTLVDNNTW\ NNSHIALVGKAMSSNETAAYKIMR TLDVDYVLVIFGGVIGYSGDDINKF LWMVRIAEGEHPKDIRESDYFTPQG EFRVDKAGFPTLLNCLMYKMSYYR FGEMQLDFRTPPGFDRTRNAEIGNK DIKFKHLEEAFTSEHWLVRIYKVKA PDNRETLDHKPRVTNIFPKQKYLSK KTTKRKRGYIKNKLVFKKGKKISK |
| 3690  | 9187                                    | A | 3965                                | 1   | 181  | ANVVFTQLLIWYGVDVRSRDARGL<br>TALAYARRAGSQECADILIQHG\CS<br>AEGCGLSSTCY  |
| 3691  | 9188                                    | A | 3966                                | 640   | 961  | DGVSASCCPGLGVQWVRFLGSL\QP<br>SASWGFKQFSCLSLPSSWDYRRALP<br>PPRPANF/SVFLVKMGFLHVG\QAG<br>LELLTSGHPAASASQSAGITGVSHR<br>TRPAASILI   |
| 3692  | 9189                                    | A | 3967                                | 2   | 334  | VGLYGRIEASSPMGEGNRW*SGTPA<br>NQG*QEQGIARPKPRGEPGLRNEGG  |

| SEQ ID      | SEQ ID   | Me  | SEQ ID NO: | Nucleotide           | Nucleotide                                       | Amino acid sequence (X=Unknown; *=Stop            |
|-------------|----------|-----|------------|----------------------|--|---|
| NO: of      | NO: of   | tho | in USSN    | location of          | location of last                                 | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide  | d   | 09/770,160 | first codon          | codon for last                                   | nucleotide insertion)                             |
| sequence    | sequence |     |            | for peptide sequence | amino acid of                                    |   |
|             |          |     |            | sequence             | peptide<br>sequence                              |   |
|             |          |     |            | 1                    | <del>                                     </del> | PGAILPGRWAGV*GPTGQEGR*RGS                         |
|             |          | }   | ]          | 1                    |  | QESCPCPAQSSCSHRVAGLDVGGSH                         |
|             |          |     | ļ          | 1                    |  | GHSAAFPATP  |
| 3693        | 9190     | A   | 3968       | 1                    | 361  | ARARLRHLRDLRAPAGPVGGLCAA                          |
|             |          |     |            |                      |  | GTACGWPGPGPLLGERVRAFLRR*                          |
|             | 1        | 1   | ĺ          |                      | Ì  | RAQHLLHHHRVRAPLPGWREAAG                           |
|             | 1        | 1   | j          | ]                    | }  | GAPPFLGTYGPESQVRLRDAVVPEA                         |
|             |          | ļ   |            | 1                    |  | GGQDSGSSGSASLRPRSSFSCSCS                          |
| 3694        | 9191     | C   | 3969       | 151                  | 373  | MPTAVXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX         |
|             |          |     | 2202       | 1                    | [ 373  | XXXXXXXXXXXXXXXXXVLPFLV                           |
|             | l        | 1   |            | }                    | }  | LEVMQCLCPVLLLYYDPNSKTRYV                          |
|             | 1        |     |            |                      |  | FFKTR*  |
| 3695        | 9192     | +   | 3970       | 50                   | 441  | IPSPPDGFFSNLGTRKPFFPCNFSCQ                        |
| 3075        | 1172     | ] ^ | 3570       | 1 30                 | 7-7-1  | NILLLTRKILLKSFLYPFFFLRWSLA                        |
|             |          | 1   |            |                      |  |   |
|             | ł        |     |            | 1                    | 1  | LPPAVLSAHCNLCPPGSSDSLASAS*                        |
|             |          |     |            |                      |  | VAGITGVHHQAWPVLPFLVLEVMQ                          |
|             |          |     |            | ľ                    |  | CLCPVLLLYYDPNSTPRYVFFKTRT                         |
| 3696        | 9193     | A   | 3971       | 3                    | 224  | FIA FLRWSLALPPAVLSAHCNLCPPGSS                     |
| 3090        | 9193     | A . | 39/1       | 3                    | 224  |   |
|             |          |     |            | Į ,                  |  | DSLASAS*VAGITGVHHQAWPVLPF                         |
| 3697        | 9194     |     | 3972       | 1                    | 214  | LVLEVMQCLCPVLLLYYDPNSFV                           |
| 3097        | 9194     | A   | 3972       | 1                    | 214  | PIQFKQRLPFGFLFVFVF*EGVLLCH                        |
|             |          |     |            |                      |  | PGWTAVTEDRSWLTATSTSWAQVI                          |
| 2600        | 0105     | 4   | 0.55       |                      |  | LQSSCLSLPGS*DYRQCLPGV                             |
| 3698        | 9195     | A   | 3973       | 154                  | 341  | KNFFRGQFWFVA*AGVQWGHFRSL                          |
|             |          |     |            |                      |  | QPQPSGVKQFFPLGLPKPLDCRCES                         |
| 0.500       | 0105     | 1   |            |                      |  | HRVPFLFLGLETL                                     |
| 3699        | 9196     | A   | 3974       | 3                    | 379  | FALVAQAGVQWCSFDSLQPPPPGF                          |
|             | İ        |     |            | 1 1                  |  | K*FSCLSLPSSWNYRHLPPRLANFV                         |
|             |          |     |            |                      |  | FLVEMGFHYVGQASLELLTSGDPPA                         |
|             |          |     |            | <b>!</b>             |  | SASQSAGIRGLSHCTWPHVSGFIMQ                         |
|             |          |     |            | 1 1                  |  | YEYTLCFMVFIMSFWRNCRKVAKY                          |
| 2500        |          |     |            |                      |  | LK  |
| 3700        | 9197     | A   | 3975       | 2                    | 35   | LKQAPCLCLPSS*DYRHLPPCLSNF*                        |
|             |          | 1 1 |            | ]                    |  | NFL*R*GLSLLPRLVSNS*PQAICPRR                       |
|             |          |     |            |                      |  | PPKVLRL*AQTSPLPLPTK                               |
| 3701        | 9198     | A   | 3976       | 1958                 | 2316   | IHSSPTKATFFLRQSLALSPRLEYSG                        |
|             |          |     |            |                      |  | AISAHCNLCFPGSSDSRALAS*AAG                         |
| l           |          | 1 1 |            | [                    |  | TTGACHHIRLIFFLFFVFLVETGFHH                        |
| 1           |          |     |            |                      |  | VGQAGLELLVSSDLPILVSLSARITG                        |
|             |          |     |            |                      |  | VSHHAQPPPKLLNALL                                  |
| 3702        | 9199     | A   | 3977       | 2                    | 80   | SLCICMCVCACIRTHA*MYVCVCV                          |
|             |          |     |            |                      |  | HTHACMNATSPSWVF                                   |
| 3703        | 9200     | A   | 3978       | 123                  | 452  | KTGSNFAPQLEAQGGNLG*LNPWP                          |
|             |          |     |            |                      |  | PG*KQFSGLTLLITWINGAPPPPRAN                        |
|             |          | 1 1 |            | Ì                    | (  | FGIFNKKGVTPCGQGGPKTRDLGIG                         |
|             |          |     |            |                      |  | PSKPPKGLEFRAQPPEPALMGKFYP                         |
|             |          |     |            | 1                    | (  | MVNLSNVPPF  |
| 3704        | 9201     | A   | 3979       | 3                    | 250  | AIAAH*NLHLLGSSNSSASVSRVAGI                        |
|             |          |     |            |                      |  | TGARHHTQLIFVFLVETGFHHVCQA                         |
| }           |          | 11  | -          |                      | ł  | GIEFLTSGDTSTSASQSARITGMSHH                        |
|             |          | j   |            |                      |  | TWPKQ   |
| 3705        | 9202     | A   | 3980       | 2                    | 257  | PRSSPTCPACLCVQVNPPAQDPEDP                         |
| -           |          | 11  |            | -                    |  | APQLSPQPQDPAKPPPQPYNPYKPY                         |
|             |          |     |            |                      |  | PNLGCGL*PQNYCIIVCMVSIVYYH                         |
| l           |          | 1 1 | l          | }                    | 1  | MGIIETVKSQ  |
| 3706        | 9203     | A   | 3981       | 2                    | 147  | LVEMGFHHVSQAGLKLLDSGNLSA                          |
|             |          | 1-1 |            |                      | ATT /  | L. DITTOLITILI TOYAGEINEEDOUNEDA                  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|--|
| 3707  | 9204                                    | A | 3982                                | 3   | 446  | S*RSAGITGISHRAHPPNSTNIYA QVVRGFGRVSKQMGIPTANFPEQV VDNLPADISTGIYYGGASVGSGDVH KMVVSI*WNPYYKNTKKSMETHIM HTFKEDFYGEILNVAIGD*LRPDKN FDCLESLISPVQGDTD*AKIRLELPE HLRI*EDTFFQVSLNRTMIVTDDK |
| 3708  | 9205                                    | A | 3983                                | 1   | 162  | FFFRVKASICCPGWSTVAQ**LTAA<br>SDSWAQKSSCFSLWSSWDNRRGLP<br>HLANK   |
| 3709  | 9206                                    | C | 3984                                | 131   | 442  | MNIPLSMSLVVSNSMQDVFWXXXX<br>XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 3710  | 9207                                    | A | 3985                                | 141   | 429  | TGSHFVAQAGMQWCNLWSMQLLP<br>AGLR*FPYLSLPSSWDYRHAPPCST<br>HFLYFFVEMGFCHVAQVGLELLAS<br>SDVPTYASQSAGITGVSNHPRPF  |
| 3711  | 9208                                    | Α | 3986                                | 1577  | 1879   |  |
| 3712  | 9209                                    | A | 3987                                | 1   | 219  | EM*SCRVTQAGVQWCNLSSLQLPS<br>PGFKQFSCLSVPSGWGYRCMPPHP<br>ANFCIFSRDRASPRWPGWSQTPDLR  |
| 3713  | 9210                                    | A | 3988                                | 1   | 414  | FF*TGSCFVSQAGTQQQDHSSLQP* TPGLKPSSHLCLLSSWDNRHLIFKFF VEMGSRHVAQAGLQLLGSNNPPTL AS*SARIISWSHRAQPTCTLCSWLC DSGAGTAESFLWQPALSRVANRGC CRRPGKLKEKQGT                                     |
| 3714  | 9211                                    | A | 3989                                | 3   | 666  | FFVETGFCHVGQAGLELLGSGNLPA<br>AASQSAGITGMSHRVRQHS*YETHR<br>KVFYS  |
| 3715  | 9212                                    | A | 3990                                | 1   | 436  | FFFFLRQNLTLSPRL*CSGTILAHC NLQHPGSSDSPASASQVAGITGVRH HIWLIFVFLVEMRFHHVGQASLELL NSGYLPTSASQSAEITGVSHCAQLQ PGILMHGLRRLTDLDDNVHHPRSRL KVTSSSAHPGAASSSFLHL                              |
| 3716  | 9213                                    | A | 3991                                | 167   | 563  | SESASEFSIFYLFIIIIIIIIIIETRSCSVA<br>QTGVQWCDHGLLQPRPPWFRPSCH<br>LSLLSSRDYR*APPHPANTFNFFLLE<br>IGSHYVAWGSLELLGSSDPPASASQ<br>SVEIIGVSHRGPDSQKSFIHLSPRFP                               |
| 3717  | 9214                                    | A | 3992                                | 3   | 456  |  |
| 3718  | 9215                                    | A | 3993                                | 78  | 129  | MDOMODY EVENTS SEE STATE   |
| 3719  | 9216                                    | A | 3994                                | 96  | 251  | MDQYSRNSPLEVNGQQLLGWYQH<br>ALRCKWNF*APLCYCSHTVFNSQPT<br>HTEE   |
| 3720  | 9217                                    | С | 3995                                | 94  | 351  | MKRISTTQYYHCQDYDLRHSKHMF<br>CLVSTAFQKVKPLYKYLEILQENLD<br>PQGKDSRWFSVISSPRSQNVKVWR<br>HLQSCLTSHCKH*   |
| 3721  | 9218                                    | B | 3996                                | 1   | 431  | MAVASTKSRWETGEVQAQSAAKT<br>LSCKDIVAGDMSNKSFWEQKGGSK<br>TSSTITAQIAFLQGERKGQENLKKD<br>LVRMIRMLEYALKQKRAKYHKLK<br>YGTELNQGAMKPPSYDSDEAQQQA  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | MRSVHGPLHILSAPPASQQKRPTER *   |
| 3722  | 9219                                    | A | 3997                                | 772   | 1391   | IANNKDALRKTWNPKFTLRSHFDGI<br>RALAFHPIEPVLITASEDHTLKMWN<br>LQKTAPAKK*EYSTLTLFEYFK*HA   |
| 3723  | 9220                                    | A | 3998                                | 3215  | 3491   | SAKVLRPTFFFFFFFFFFFAIESHCVT<br>QAGVQWCNLASLQPSPTEFK*FSCL<br>GLPSSWDYRCVPPHPANFYIFSRDR<br>VSPCWPGWSKTPDLK  |
| 3724  | 9221                                    | A | 3999                                | 1   | 779  | MNNGRNYRCQNLVDKGVGENRGP ADNRMLVAHQCSREEKLKEPDEQV TPAVCQQDSLAMERLGRSPTAEEK VPETTTRFWAPGVEAPGDDAERRR REASGPATRHSPLPTAGITAPKAGS AKVQLSILKPSKLDKCSHKTSHTKS SYHYFLHYPVSSTVQPVAAAATPSY ALIGSSLWPVNERGRQEESRTCIIDQ SAWHVGRAEIRKLLPYCSTQGGLK YSDVTSGMVKDPPDVL/DRQKCLD ALAALRHAKWSSEIRF  |
| 3725  | 9222                                    | A | 4000                                | 1   | 1286   | MEMRRYEEDMYWRRMEEEQHHW DDRRRMPDGGYPHGPPGPLGLLGV RPGMPPQPQGPAPLRRPDSSDDRYV MTKHATIYPTEEELQAVQKIVSITER ALKLVSDSLSEHEKNKNKEGDDKK EGGKDRALKGVLRVGVFAKGLLLR GDRNVNLVLLCSEKPSKTLLSRIAE NLPKQLAFISPEKYDIKCAVSEAAII LNSCVEPKMQVTITLTSPIIREENMR EGDVTSGMVKDPPDVLDRQKCLDA LAALRHAKWFQARANGLQSCVIIIR ILRDLCQRVP\TWS\DFPSWAMELLV EKAISSAS\SPQSPGDAL\RRVF\ECIS SGVILK\GSPG\LLDPCEKDPFDTLG QQ*PDPASRED/LSTSQCHSLPLETS LAFPPRYHKV\LGMDPITRK*AQRF NI\HNNRKRRRD\SDGVDGFEAEGK KDKKDYDNF |
| 3726  | 9223                                    | A | 4001                                | 2   | 379  | DLPASATQNAGITGVSHHIWPRIIFL<br>LW*KTFTILTFLSVQYSSSNYIHPVC<br>NRALELFKSYKTETKLNFPSPPPPIP<br>VNLHCIFFF*GLTFLLGFFSLPKYRG<br>FTNFVSPCTVAMLTRGGGGGEF  |
| 3727  | 9224                                    | A | 4002                                | 229   | 445  | RPGPNFGLLETLTWGLKGTLWLNP<br>PKNWELGAHPPTPGNFWIF*KGGF<br>WNVSQGGSKTRGLRELPPFSWKKG  |
| 3728  | 9225                                    | A | 4003                                | 192   | 529  | HEVLNFLTSCVLTTLVFLIADIIWLS<br>CRTRSLPFVATTLEVLPLSLIGLCHH<br>TILVFISNAFFI*KAYFVTSSFIMFP*S<br>FFLFNISVLSYMYLTFSHLTSFVIAY<br>FSYSHI  |
| 3729  | 9226                                    | A | 4004                                | 330   | 754  | SDLSQKESSSSLSKFLVTEKNSSLGS<br>GGCDMANKENELACAGHLPEKLH<br>HDSRTYLVNSSDSGSSQTESPSSKYS<br>GFFSGGFLRDHETM\AQVLFSRDMR<br>LNVALTFWRKRSISELVAYLLRIED<br>LGVVVDCLPVLTNCLQE  |

| SEQ ID      | SEQ ID   | Ma            | SEQ ID NO: | Nucleotide  | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop  |
|-------------|----------|---------------|------------|-------------|---------------------|--|
| NO: of      | NO: of   |               | in USSN    | location of | location of last    | codon; /=possible nucleotide deletion; \=possible  |
| nucleo-tide | peptide  |               | 09/770,160 | first codon | codon for last      | nucleotide insertion)  |
| sequence    | sequence |               |            | for peptide | amino acid of       |  |
|             |          |               |            | sequence    | peptide<br>sequence |  |
| 3730        | 9227     | A             | 4005       | 296         | 861                 | VSQDHETMAQVLFSRNMRLNVALT   |
| 3,20        | )        | 1             |            | 1 200       | ***                 | FWRKRSISELVAYLLRIEDLGVVVD  |
|             |          |               |            | 1           |                     | CLPVLTNCLQEEKQYISLGCCVDLL  |
|             |          |               |            | }           | ļ                   | PLVKSLLKSKFEE*CY*WVLTGLQA  |
| {           |          |               | [          | ĺ           |                     | VIKRWWSELSSKTEINDGNIQILKQ  |
|             |          |               |            |             |                     | QLSGLWEQENHLTLVPGYTGNIAK   |
| 1           | i        | İ             | }          | ĺ           | Ì                   | DVDAYLFPVTIEGFHLLKSIWFFKTS   |
| [           |          |               |            | 1           |                     | LELYNLQKKKVSV  |
| 3731        | 9228     | A             | 4006       | 2           | 265                 | NNFFSFSETESHSVTQAEAQWYDNS  |
| 3,31        | 1 220    | 1             | -1000      | 1 -         | 203                 | SLQP*ILGLKQSFCLSLPSNWDHRC  |
| Ī           |          |               |            |             |                     | APPHPQFSFLIPGLYVSQFILGNKPSS  |
| 1           |          |               | }          | İ           | ļ                   | LPCQMFKSAV   |
| 3732        | 9229     | A             | 4007       | 3           | 295                 | HFNLSHRSAQAKGNRYKEAEALTN   |
| 3,32        | 1227     | ^             | 1 100 /    |             | 2/3                 | AAVHVDDMPNALNALIDLRAHNLG   |
| 1           | 1        |               |            |             | 1                   | QDPVNFKRLSHCLLVTLAAHLLAEL  |
|             |          |               |            |             | }                   | TPAVHA*LDKFLASVSTVLTSKYT   |
| 3733        | 9230     | A             | 4008       | 1           | 1077                | ATTIVITE EDICIDION TO THE TOTAL TOTA |
| 3734        | 9231     | $\frac{A}{A}$ | 4009       | 3           | 285                 | ETESRLATQAGVQCCDLGSLQPLSP  |
| 3.3.        |          | 1             | ],         |             | 200                 | GFK*FSCFSLPSSWDYRYPPSCQAN  |
| 1           | 1        |               |            |             | Ì                   | FCILVEMGFHHVGQASLELLTSGDP  |
|             |          |               |            | ]           |                     | PASASQSARITGVSHRAQ   |
| 3735        | 9232     | A             | 4010       | 1           | 338                 | VIATYHGGLCTQKSQPPPPQALWSA  |
| 3,33        | 1 222    | ^ ^           | 1010       | *           | 330                 | STSTINLMVSTEPLALTETHICKLPK   |
| ]           |          |               |            | )           | ]                   | D*GTCRDFILPWDYDSNTKSCARF   |
|             |          |               |            | 1           |                     | WYGRCSANENDFGSQSECEKVCAP   |
| j           |          |               | ļ          | j           | j                   | VLCKPGVISEMAT  |
| 3736        | 9233     | C             | 4011       | 269         | 526                 | MLARLVSNSLPQVIHHTQPRVGSPT  |
|             |          |               |            |             |                     | RIPTLSLNLPLPLALTSLRWDRHQLR   |
| 1           |          |               |            | Į           |                     | GQGHWGAQELRAITGFKDHQVWQ  |
|             | Ì        |               |            | İ           |                     | TLNCSLCVPKP*   |
| 3737        | 9234     | A             | 4012       | 2           | 51                  |  |
| 3738        | 9235     | A             | 4013       | 83          | 5229                |  |
| 3739        | 9236     | A             | 4014       | 3           | 45                  | EVVHALRCRWWSWGLKLDLLTPEP   |
| }           | ļ        |               |            | j           | j                   | EPICGPALLSRSSLRGSHPTAFLLPP   |
|             |          |               |            |             | ļ                   | QVSQ*RGELGPSTFRAFRAEFPTSRG   |
| 1           |          |               |            |             | ]                   | SKDNKEKNQQEQDMAKPATGTGQ  |
|             |          |               |            |             |                     | G*GADGGAGA   |
| 3740        | 9237     | A             | 4015       | 3           | 323                 | LLWKVESSWRDQKDIMSWEWDKR  |
| ļ           | ]        |               |            |             |                     | RRRHHLTDRSQLCSKVKFQVDCDLI  |
| ļ           | 1        |               |            |             | 1                   | EWGTWIINLKQYNAYHCEGECHNP   |
| ]           | ]        |               |            | ļ           | ļ                   | VG*KFHQSNHAYIQVGCQVLGGEE   |
|             | 0000     |               | 40.5 5     | <u> </u>    |                     | AVIWHWGTGL   |
| 3741        | 9238     | A             | 4016       | 2           | 279                 | FFFFEAKSHSVTRMLECNGAISAPC  |
|             | 1        |               |            | 1           | 1                   | NLHLPGSSDSPASASQVVGITGVYH  |
|             |          | 1             |            |             |                     | HTQLIFIFSVETGFCHVGQDGLNLPD   |
| 2740        | 0000     | <u> </u>      | 4015       | 1.00        |                     | LMIHPPWPPKVLG*QA   |
| 3742        | 9239     | A             | 4017       | 166         | 939                 | VEL CODD OF EDDING DOORS AND AND AND AND AND AND AND AND AND AND   |
| 3743        | 9240     | A             | 4018       | 2           | 225                 | KELTGRRCAEPPHPRPSPQLLTEEPF   |
| [           |          |               |            |             |                     | TKGRFSGEWRGRNAASMKTGPFAE   |
|             |          |               |            |             |                     | HSNQLWNISAVPSWSKVNQGLIRM   |
|             |          | 1             |            |             | ĺ                   | YKAEP*EGADRKALCRASPPPPIPPV   |
|             |          |               |            |             |                     | TDRGAIYKRPILWGVERQERSVYED  |
|             |          |               |            |             |                     | WPICRALQPAVEHQRRPFLVQSEPG  |
| 3744        | 9241     | A             | 4019       | 142         | 1336                | SHPHV  |
| 3744        | 7241     | A             | 4017       | 142         | 1220                | KARGDCKHPGRCWPEQMAEGERQ<br>PPPDSSEEAPPATQNFIIPKKEIHTVP   |
|             | 1        |               |            |             |                     | DMGKWKRSQAYADYIGFILTLNEG   |
| L           | L        |               | L          | <u>l</u>    | l                   | DIVIGIA WIKKOYA LAD LIGITUTUREG  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop<br>codon; /=possible nucleotide deletion; \=possible<br>nucleotide insertion)  |
|---|---|---|-------------------------------------|----------------------------|--|--|
| 3745  | 0242                                    |   | 4020                                | 80                         | 283  | VKGKKLTFEYRVSEAIEKLLALLNT LDRWIDETPPVDQPSRFGNKAYRT WYAKLDEEAENLVATVVPTHLAA AVPEVAVYLKESVGNSTRIDYGTG HEAAFAAFLCCLCKIGVLRVDDQIA IVFKVFNRYLEVMRKLQKTYRMEP AGSQGVWGLDDFQFLPFIWGSSQLI DHPYLEPRHFVDEKAVNENHKDY MFLECILFITEMKTGPFAEHSNQLW NISAVP\SW\SKVNQGLIRMYKAECL \EKFPVIQH/FSKFGSLLPIHPVHVGL GGAKPKEPPRGTVSCCLPFPTPAVA PPPSPPSVSSRLMRGCLLGLGGEMG LRGLRA |
|   | 9242                                    | A |                                     | 80                         |  | DI IOMONDEECKETO A VANDVENIO   |
| 3746  | 9243                                    | A | 4021                                | 61                         | 626  | DLICVIGVPEEEKETGAKNIFKEIMG<br>ENSPHLVKDVIVHIEEIHSQIDEN***<br>Q*KSYK**QKGIIIKLRVDLLETMEA<br>KCSRTPSLKCLGKESFGESWESRILH<br>PAEISHRNECHMKIILDFKSEKGPDA<br>VAHTCNPSILGGHTAGGSLEARSFE<br>TNLPETLSLLKKLNLKEKEFVASYP<br>PLVEMLK   |
| 3747  | 9244                                    | A | 4022                                | 18                         | 161  | TSFKNPPPPPPPGGLKKIPSPPPPKKK<br>KFKDVS*PTYYFLYLNASSVT   |
| 3748  | 9245                                    | A | 4023                                | 30                         | 262  | NRRQAGPFPAKLGRPSPKGGFPNFF<br>KSSSSKSSF*KNPKGQGWGFPPLIPG<br>FQGPQVGGSLGAPGLKPPWGTPQN<br>PF  |
| 3749  | 9246                                    | C | 4024                                | 193                        | 366  | MYNYRSIPKNKYTYTYTKSYPNKIF<br>SRLILYIPLGTVSQISTLNCVPRFVLL<br>TWKAL*   |
| 3750  | 9247                                    | A | 4025                                | 3                          | 258  | TIDSLLKGLPCKQNEPWHTIQCGYL<br>GNSSKWNI*YQSGKDFIRIAFCVCIC<br>I/CYF*E*IYSCT*IPVRNTLNELNPLA<br>KCPCPFH   |
| 3751  | 9248                                    | C | 4026                                | 164                        | 313  | MEGTRIFGKWVKLIQSIPNRNSCTTI<br>DLFLKINIHIHTQKAILMKSFPD*   |
| 3752  | 9249                                    | A | 4027                                | 9                          | 373  | DRVSLCRPTLEVQWRDLGSLQPPSP<br>QVQSNSPALSLPSSWDYRRVPPCPS<br>*FFVFLSRRWRFHRVGQTALFLIKM<br>MGKKILKIKSNYTLGLYVGPSYSER<br>MIKPQEFESSLGQHCKTPSQK  |
| 3753  | 9250                                    | A |                                     | 1                          | 336  | DRILLHRPCWSTLARS*LTIPSNHLG<br>SVFPPSALLES*DCRHTPTTPD*FLKI<br>FL*RRGLTVFPRLVLNAWTQAIIQPL<br>PLKALGLQDTFFKNINCDRLKVSEY<br>YSDTEIEI   |
| 3754  | 9251                                    | A | 4029                                | 514                        | 742  | LPKC*DHRHEPPHQAKFFNFFVEMG<br>SCHVPQSGLQLLGSSDLPASAFYSA<br>GIAGMSHHTWPPYLFKSRHKSRFCP<br>S   |
| 3755  | 9252                                    | A | 4030                                | 1                          | 264  | QAQGKHPGSFGPPFAGLKGFPGLGF<br>PRTGNSGGFPQGGKYKGFLIKNGVP<br>PSFQGGF*IPGPGSHQRLGFRG*VGR<br>AL*TPGFRATLF   |
| 3756  | 9253                                    | A | 4031                                | 7                          | 417  | RQDLALSPRLECSDTIIAHCSIKLLG   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)                             |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | SNGAPSAAS*VAGTTGTRHHAQLIF<br>LKIFVETRSLYVAQASCVFPASSNPP<br>TSASQSTGITGMSCCARPTSYVPGS<br>DLSVLCILTHLILKIPLYRRYYYFVS<br>LTYSKAEVQ            |
| 3757  | 9254                                    | A | 4032                                | 123   | 376  | KTGSNFVPQAEAQGGNSG*LNPLPP<br>G*KQFSGLTLLITWINRAPPPPRANF<br>GIFKKKGVSPCC*GGLKTPNSGFSPF<br>KPPKGLE   |
| 3758  | 9255                                    | A | 4033                                | 3   | 292  | QWHKHGLLQPQPPGLK*SSHLSLPR<br>SWDHRHVSPCLTNFF*FSVSMGSCY<br>VAQAGLKHLASSDPPASASVGTIG<br>MSTT*SKTTLYTEKLANIILTK                               |
| 3759  | 9256                                    | A | 4034                                | 1   | 230  | FFF*TDSCSVAQAGLQWRDYRPEPP<br>CPANFITIKQVQNKSVTFPARNLNK<br>MRGASIMLYPIGLSLNDLMQLLSEG<br>F   |
| 3760  | 9257                                    | A | 4035                                | 3   | 189  | SWDYRRLPHARLIFVFLVGTGFHHV<br>VQAGLELLTS*FTRLGLPRCWDYRR<br>EHIAPGHIWTY  |
| 3761  | 9258                                    | Ā | 4036                                | 2   | 148  | PGSSNPPTSASQLAGTAGTHHHA*LI<br>FVCLVETGFCHVA*AGV*VKFF   |
| 3762  | 9259                                    | A | 4037                                | 348   | 696  | AEEQDKKGRQ*ERGKEWERETETK IYSRIKGNREGQAKKKWGHGELIH KTKDEKRKKSEEDKKLRWRKR*TN SQKD*IRKRLHKETANSER*EEKHK ERKQWRRGPKARRAISRG                    |
| 3763  | 9260                                    | A | 4038                                | 1   | 295  | QNQFFIFIYFKTESGSVTRLEYSGVIS<br>AHCNLCHPGSSQSPASAS*AAGTTG<br>AHHHIQLLFVFLVETGFHHVGQAG<br>LELLTSSDLPASASQSAWGLQV                             |
| 3764  | 9261                                    | A | 4039                                | 6   | 151  | SQGLALLPRLISNPWVQAILLPWPP<br>KVLGL*AEIAQNKMQK  |
| 3765  | 9262                                    | A | 4040                                | 101   | 318  | SNHTLGTS*HFFFETVSCCIMLHRVE<br>CSGAVIAHCNLELLGSSDSPASTS*V<br>AGTTAVYHHTGLSWLLNHLH   |
| 3766  | 9263                                    | A | 4041                                | 210   | 306  | SWPGTVAHICNPSALGGQGGWIA*<br>GQAFRQA  |
| 3767  | 9264                                    | A | 4042                                | 2   | 147  | DFSVKTL*ARREWRDIFTVMKEKNF<br>YPRKVYALKIPFKNEAETKKVEV   |
| 3768  | 9265                                    | A | 4043                                | 160   | 525  | NTQTRSFGNRLMAPAQSSHKALTK<br>KVMTNCPSETVHDSQECFFVLFFET<br>VLVCLPGWSAVMLVRCSLCLLSSW<br>DYRRVPPHLG*FLYF**R*CLTMLA<br>RMVSNS*PQVIHLPRPPKLLGLQA |
| 3769  | 9266                                    | A | 4044                                | 3   | 72   | KTQVHFQGWQHSVHIITHPCWEKL<br>ALSITPLR*DNRKLQAWNSPRLGPT<br>CLFPRLALMCVLML**NIHEYNSFQ<br>RVLWVLLVNC*ISKVGSTLCISSHIP<br>AGRS                   |
| 3770  | 9267                                    | A | 4045                                | 313   | 358  |  |
| 3771  | 9268                                    | A | 4046                                | 7   | 308  | AGGRRARAPHLGGRGAARGRL*RV<br>RGHRERGLRAAPVPRPQPQLRRGA<br>AAGAVQPGQGVGRAGPPEGSEGSV<br>AGVGLDLDSSCYHHSSDFYICHPMP<br>ISS                       |
| 3772  | 9269                                    | A | 4047                                | 92  | 390  | ETGSHSVNLAGLQWCDHNSLQP*T   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)                             |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | PGLKQSSYLSLLSS*DYRWVPPCPA<br>NF*IFFVEIRSCHISQAGLDLPRPSDP<br>PVWGSQSAGTIGMSHHAQPREIC   |
| 3773  | 9270                                    | A | 4048                                | 65  | 375  | SQLTATSTSRVQ*HDLSSPQPPPPGF<br>KRFSCLSLPSGCDYRHPPPHLANFL<br>YFLVETGFCHVGQAGLELLTSSDLP<br>ALASQSAGITGVRYCAWPTFLIMKT<br>CIPSFPLPSTSPIPLP       |
| 3774  | 9271                                    | A | 4049                                | 12  | 292  | DIVSPVA*TRMQWHNLGSLQPPPPR<br>FKQSLCFSLPSSWDYRCVPPCPAIFF<br>VFLAEMGFCHIGQAGLELLASSNPT<br>TLASQSAEPPHLAATDF                                   |
| 3775  | 9272                                    | A | 4050                                | 40  | 343  | SSSSLILSSSVIYLLLNLSIDFLVLLLY<br>FLVFRFSVCSFCFQFFVKNFNLIFYF<br>FKHIKNICFKVCV*RLGFLDPLCAYF<br>GCLLFL*VFSHVLSLHIPDDL                           |
| 3776  | 9273                                    | A | 4051                                | 97  | 282  |   |
| 3777  | 9274                                    | A | 4052                                | 3   | 336  | FFETGSRFVTHAGVKWHNHDSLHP<br>QPPRLK*FSYFSLLLSSWDHRHVPP<br>RPANLVYLL*RGGPPSMLPRASLEF<br>PGLQVNSSLPSALPKVLGITG*GHRP<br>RPKVTFHQRG              |
| 3778  | 9275                                    | A | 4053                                | 3   | 294  | CCFGDGVSLCRPGWSIECSGNHSSL<br>QAVEPPRLR*SSRLSLLGSWDPSHV<br>PLHLANF*TFCTHGVLAMLPLAGLK<br>TPWAQTIPPHLSLPKVLGLQG                                |
| 3779  | 9276                                    | A | 4054                                | 16  | 308  | MPQPN*SNPPVNCRQLPRGPPSQVP<br>PRIHLSPKYSPSPEASAPDLQKKGNL<br>QAPRRPGEVLETPRKPESSCMKPFP*<br>REIKPLPPPRLTPSVHSMVL                               |
| 3780  | 9277                                    | A | 4055                                | 445   | 448  | IS*HCDASASIFRKKQRKQINKHPTL<br>ASRVLGLAMEMQDETWCSGQSET<br>VN*SQTAQNHPQPGS*PAGVCLWV<br>ASSQHFTPQPLKKKPNPDSAKLNSA<br>SDSLTEVILCKIFSAWQTDK      |
| 3781  | 9278                                    | A | 4056                                | 3   | 284  | CLSLLSSWDYKCLPPRLGYFLYF** RRGFTVLARMVSISRMVSISRMVSIS *RRDPPASASQNAGITGVSHCARPK EQKLFYPEVSCLYLGLY  |
| 3782  | 9279                                    | A | 4057                                | 428   | 636  | DYHIVSLLHLF*FLETGSHSVTQAGI<br>QWCDHSSL*PRTPGLKQSSCLSLPE*<br>LGLQE*VTVPGSYSLFF   |
| 3783  | 9280                                    | A | 4058                                | 2   | 113  | FFGRDGVSLCCPDWS*TPGLKGSSC<br>LGLPKCWDYRRE   |
| 3784  | 9281                                    | A | 4060                                | 36  | 359  | RSGVQNGFHQAEVLSVRLCFSTEAL<br>GQNPMPFPAPPGATSSPGPRPSCHL<br>HSQKL/TLLHAQTLVTPLPL*GLGLS<br>AWRTLAGGAPGLHPFTTHALSTPET<br>IPGAYRRT               |
| 3785  | .9282                                   | A | 4061                                | 17  | 168  | APGMVSGVLSACVVNGWSPGAPPA<br>SVLQA/PQT*PF*SRPHVTSQPLLKA<br>PH  |
| 3786  | 9283                                    | A | 4062                                | 2   | 375  | FFFFENHTNLLSYSSRGSGVQNGF<br>HQPEVLSVRLCFSTEALGQNPMPFP<br>APPGATSSPGPRPSCHLHSQKLPLLH<br>AQTLVTPLPL*WPPWITQGPPQPST<br>GHLPTTEILKLKHRRRVPFCHAR |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----------|-------------------------------------|---|--|---|
| 3787  | 9284                                    | A        | 4063                                | 309   | 620  |   |
| 3788  | 9285                                    | A        | 4064                                | 3   | 218  | LRQSYSVTQAGVQWRNLGSLQPLP<br>PGFKRFSCLSLRKS*DYRRPRLPNFC<br>ILVKTGVHPCWSGWSQTLDLR   |
| 3789  | 9286                                    | A        | 4065                                | 1   | 170  | NPKATPPQIVNGDQYCGDYELFVE<br>AVEQNTLQEFLKLA*VKPVQSSPAG<br>LHHHTPL  |
| 3790  | 9287                                    | A        | 4066                                | 29  | 483  | RRLPAVQLPLTAALCPPARLSTPSM<br>SGPARSTARRATGFREIKVPSKSEVT<br>RIL\EGKRIQYQLVDISQDNALRDEM<br>RALAEQPQGHPTPDLSTGDQYCGD<br>Y/DASFVEAVEQNTVAG\FPGSLGL<br>KFKPCSRVSPCWDSHHQHSPPAFQP<br>GQ   |
| 3791  | 9288                                    | С        | 4067                                | 33  | 236  | MRHHAWLIFVLLVETGFHHVGQAG<br>LEHLISGGPPTSASQSAGITGVSHHA<br>WPIYLFILLSGPSRLCF*  |
| 3792  | 9289                                    | A        | 4068                                | 1   | 205  | AIGTDKGTRWPSEDDPGNLPEIFLFI<br>LGPTADYV*RERQRSIELESFYRRV<br>WGSPGGEGTGDLDEFDF  |
| 3793  | 9290                                    | A        | 4070                                | 2   | 44   | LSSWDYRHVPPRLANFCIFSRDGGF<br>TMLARLVLNS*PQVIHPPQPP*VL*L<br>QACATTPG   |
| 3794  | 9291                                    | A        | 4071                                | 173   | 369  | CSTLI*IRKVWLGAVAHAYNPNTLR<br>GRGGRIA*GQVFKTSLGNNVKTCLF<br>LPSPHNQQSLSGFLL   |
| 3795  | 9292                                    | A        | 4072                                | 1   | 336  |   |
| 3796  | 9293                                    | A        | 4073                                | 1   | 200  |   |
| 3797  | 9294                                    | A        | 4074                                | 11  | 392  |   |
| 3798  | 9295                                    | A        | 4075                                | 1   | 191  |   |
| 3799  | 9296                                    | A        | 4076                                | 84  | 264  |   |
| 3800  | 9297                                    | A        | 4077                                | 2   | 446  | DSARNSRVDGCE/IDRQKGTNDSLM<br>MLMRELEDRFASEASGYQDNIARL<br>EEEIRHLKDEMARHLREYQDLLNV<br>KMALDVEIATYRKLLEGEESRINLPI<br>QTYSALNF\RETSPEQRGSEVHTKK<br>TVMIKTIETRDGEVVSEATQQQHEV<br>L  |
| 3801  | 9298                                    | A        | 4080                                | 3   | 196  | SRAKGPKNYNFGQGPPTKVKGPLA<br>SPFFPLLPPFPRPPWFPFPPF*NPIFPW<br>W*KGPKKPFLLN  |
| 3802  | 9299                                    | A        | 4081                                | 1   | 187  | SIRLFFFCFFF*AETGFRHIGQAGFGL<br>LTSSVPPALASQSAGIIGVSHRARPC<br>SSLIVLHL   |
| 3803  | 9300                                    | A        | 4082                                | 156   | 326  | KLEICRRARVSLKIGFIRPGTVAHAY<br>NPSTLEGRGRQIT*DQEFETSLANM<br>VKPCLY   |
| 3804  | 9301                                    | Α        | 4083                                | 3   | 448  |   |
| 3805  | 9302                                    | A        | 4084                                | 1   | 4249   | AAATIRYLKTTMAWKTLPIYLLLL<br>SVFVIQQVSSQDLSSCAGRCGEGYS<br>RDATCNCDYNCQHYMECCPDFKR<br>VCTAELSCKGRCFESFERGRECDCD<br>AQCKKYDKCCPDYESFCAEVHNPT<br>SPPSSKKAPPPSGASQTIKSTTKRSP<br>KPPNKKKTKKVIESEEITEEHSVSEN<br>QESSSSSSSSSSSSSTIWKIKSSKNSAA<br>NRELQKKLKVKDNKKNRTKKKPTP |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop<br>codon; /=possible nucleotide deletion; \=possible<br>nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   | ·                                   |                         |  | KPPVVDEAGSGLDNGDFKVTTPDT STTQHNKVSTSPKITTAKPINPRPSL PPNSDTSKETSLTVNKETTVETKET TTTNKQTSTDGKEKTTSAKETQSIE KTSAKDLAPTSKVLAKPTPKAETTT KGPALTTPKEPTPTTPKEPASTTPKE PTPTTIKSAPTTPKEPAPTTTKSAPTT PKEPAPTTTKEPAPTTPKEPAPTTTK EPAPTTTKSAPTTPKEPAPTTTK EPAPTTTKSAPTTPKEPAPTTTK EPAPTTTKSAPTTPKEPAPTTPKEPAPT TKEPAPTTPKEPAPTTPKEPAPT TREPAPTTPKEPAPTTTKEPSPTTPKE APTTTKSAPTTTKEPAPTTTKSAPTT PKEPSPTTTKEPAPTTTKEPAPTTTKKP APTTPKEPAPTTPKEPAPTTTKKP APTAPKEPAPTTPKEPAPTTTKKP APTAPKEPAPTTPKETAPTTPKKLTP TTPEKLAPTTPEEPAPTTPKEAAPNTPK EPAPTTPKEPAPTTPKEAAPNTPK EPAPTTPKEPAPTTPKEPAPTTPKET APTTPKGTAPTTLKEPAPTTPKGTA PTTLKEPAPTTPKEPAPTTPKGTA PTTLKEPAPTTPKEPAPTTPKG TAPTTPKEPAPTTPKEPAPTTPKG TAPTTPKEPAPTTPKEPAPTTPKG TAPTTPKEPAPTTPKEPAPTTPK GPTSTTSDKPAPTTPKETAPTTTK GPTSTTSDKPAPTTPKETAPTTTK GPTSTTSDKPAPTTPKETAPTTTK TTKEPTTIHKSPDESTPELSAEPTPK ALENSPKEPGVPTTKTPAATKPEMT TTAKDKTTERDLRTTPETTTAAPKM TKETATTTEKTTESKITATTTQVTST TTQDTTPFKITTLKTTTLAPKVTTTK KTITTTEIMNKPEETAKPKDRATNS KATTPKPQKPTKAPKKPTSTKKPKT MPRVRKPKTTPTPRKMTSTMPELNP TSRIAEAMLQTTTRPNQTPNSKLVE VNPKSEDAGGAEGETPHMLLRPHV FMPEVTPDMDYLPRVPNQGIINPM LSDETNICNGKPVDGLTTLRNGTLV AFRGHYFWMLSPFSPPSPARRITEV WGIPSPIDTVFTRCNCEGKTFFFKDS QYWRFTNDIKDAGYPKPIFKGFGGL TGQIVAALSTAKYKNWPESVYFFK RGGSIQQYIYKQEPVQKCPGRRPAL NYPVYGEMTQVRRRFERAIGPSQT HTIRIQYSPARLAYQDKGVLHNEVK VSILWK\GLPNV\VTSAISLPNIRKPD |
| 3806  | 9303                                    | С | 4085                                | 258                     | 362  | GYDYYAFS\KDQYYNIDVPSRTARA<br>ITTRSGQTLSKVWYNCP<br>MFYRNLMKVRAELNCSAIILIEIKA   |
| 3807  | 9304                                    | A | 4086                                | 2                       | 236  | KVLTLFHSN*  QSYNSDSLFFLRRSFALVTQAGVQ  WRDLGSLQLPSPGFK*FSCLSLPSS  WVYRCPPPDPANFLVLVETGFHHV  GQGWS  |
| 3808  | 9305                                    | A | 4087                                | 224                     | 464  | KIFLFFFFFKKRQGLTLSCRLDCSVQ<br>*HNHYPLQSRTPELKQSSCLSHPKY<br>WD*RHEPLCLAPKKEDTLQEQLEIR<br>LLIY  |
| 3809  | 9306                                    | Α | 4088                                | 129                     | 315  | ILKILWIFRIFLLSIKCFF*TNMHVCV   |

| SEQ ID                            | SEQ ID                  | Me  | SEQ ID NO:            | Nucleotide              | Nucleotide   | Amino acid sequence ( X=Unknown; *=Stop  |
|-----------------------------------|-------------------------|-----|-----------------------|-------------------------|--|--|
| NO: of<br>nucleo-tide<br>sequence | NO: of peptide sequence | tho | in USSN<br>09/770,160 | location of first codon | location of last<br>codon for last<br>amino acid of<br>peptide | codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
| <u> </u>                          | <u> </u>                | -   | <u> </u>              | <del> </del>            | sequence   |  |
|                                   |                         |     |                       |                         |  | SCLFIFLTVSFIEQTF*ISFFYASWIML<br>LMSFFF   |
| 3810                              | 9307                    | A   | 4089                  | 1                       | 190  | FFF*IGPHSVAQAGVRWCDLGSCSL<br>NLPGSSDPPASASQVAGTTGVHYYT<br>QLIFKFFIEMRAP  |
| 3811                              | 9308                    | +   | 4090                  | 1                       | 5229   | Q2   |
| 3812                              | 9309                    | A   | 4091                  | 1                       | 7044   |  |
| 3813                              | 9310                    | A   | 4092                  | 170                     | 422  |  |
| 3814                              | 9311                    | A   | 4093                  | 1                       | 3230   |  |
| 3815                              | 9312                    | A   | 4094                  | 3                       | 151  | DTATCCAKWNTEDKVSHVSTGGG<br>AS*ELLEGKALPGVDATSTIYYFPAF  |
| 3816                              | 9313                    | A   | 4095                  | 2                       |  | SLRSARRQSAPSLTESPTSLPSCISK MSLSNKLTLDKLDVKGKRVVMRV DFNVPMKNNQITNNQRIKAAVPSIK FCLDNGAKSVVLMSHLGRPDGVPM PDKYSLEPVAVELKSLLGKDVLFLK DCVGPEVEKACANPAAGSVILLENL RFHVEEEGKGKDASGNKVKAEPAK IEAFRASLSKLGDVYVNDAFGTAHR AHSSMVGVNLPQKAGGFLMKKEL NYFAKALESPERPFLAILGGAKVAD KIQLINNMLDKVNEMIIGGGMAFTF LKVLNNMEIGTSLFDEEGAKIVKDL MSKAEKNGVKITLPVDFVTADKFD ENAKTGQSTWA\SGITPG\WMGLDC CPESS\RKYAE\AVTRAKQMVWNGP V\GYFE\WEAFA\RGTKALMDEV\VK A\TSRGLPSPS*GGWRPLPTCCAQM ETREDKSQPM*ATGGWCPVWQLLE G*SPFLGVDALSQYLGTFPALLSPC AQPPKVNLGIFLHLPLGH |
| 3817                              | 9314                    | A   | 4096                  | 1                       | 747  | MDSSRARQQLRRRFLLLPDAEAQL<br>DREGDAGPETSTAVEKKEKPLPRLN<br>IHSGFWILASIVVTYYVDFFKTLKEN<br>FHTSRSPESPAPRRGGVRASVPQKL<br>AEMLSSQYGLIVFVAGLLLLLAWA<br>VHAAGVSKSDLLCFLTALMLLQL/P<br>VDAVVRGPQLRAPPPLPPQGHARG<br>CRLAARQRPPTVSTGRGEHVDSPPP<br>AQRRSYLPLRLRGAEFASEPPSAPA<br>HR\ATPPPVEVTPTEAGRRFRQAKG<br>ALS  |
| 3818                              | 9315                    | A   | 4097                  | 1103                    | 1295   | EQEGTGLERRRGSPMSKDWPPPHL<br>TPPQGPCGIPVHSLSPPSFS\PGPRNS<br>K*ARRSTAPVDCK   |
| 3819                              | 9316                    | A   | 4098                  | 1                       | 1302   | MVAGSDNYHEVSLHDGVIGARGCP PPSPSARGARSPRPPGGCARQPTEA GRDAEQPVWADRVRGGAAAAAGL GRARRGLAESDLLCFLTALMLLQM LWYVGRSSAHRRLFRLKDTHAGAG WLHRLLWIPPAFGCRPEYDNGLEEI VFGFEPWIIVVNLAMAFSIFYAMHA AASLFEVYSGISETSVLGDWSKPSTF DSKASGLRHLKTSKGKSSLVNASIP TPPSPFRPSQPSEPASQPAKPAKPAK PVSQPSQPSQT\PGKPAKPAKPPKPA KPPASQASQASQASQPGMPAKPAKPAS  |

| SEQ ID<br>NO: of<br>nucleo-tide | SEQ ID<br>NO: of<br>peptide | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon | Nucleotide<br>location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---------------------------------|-----------------------------|-----|-------------------------------------|--|--|---|
| sequence                        | sequence                    |     | 37770,100                           | for peptide<br>sequence                  | amino acid of peptide sequence                   |   |
|                                 |                             |     |                                     |  |  | K/PKPGMPAKPARQPSQPAKTAKPA<br>NQPSQSASQASQPASQPSRPACQPT<br>KSARQPRQPSLPAAKRANATYQRS<br>HSASQDRHASEPTSQPSSQHSAARP   |
|                                 |                             |     |                                     |  |  | AATSQPDSRAANQSAVEQARQPSA<br>KHSGKQQADSEAAAGS  |
| 3820                            | 9317                        | Α   | 4099                                | 684                                      | 902  |   |
| 3821                            | 9318                        | A   | 4100                                | 143                                      | 551  | TNEFPFHSRSPPQIQTS*AHFPHLITD<br>PDLLSPLSPSHHRSRPPEPTSPISPQIQ<br>TC*AHFPHLITDPDLLSPLSPSHHRS<br>RPPEPTFPISSPVISWAPAISFPNCCC<br>KQTATDSSGFHFCLIVLIAKSPKRISP<br>G  |
| 3822                            | 9319                        | A   | 4101                                | 14                                       | 209  | ASFKVWLIWE*RPWHGTYPSCKNW<br>GKFASGSVTIWFKLPSGPLALSGIL<br>MRLLLLSLSLHENSVS   |
| 3823                            | 9320                        | A   | 4102                                | 126                                      | 265  | MKLLLLSLSLHENSVS  |
| 3824                            | 9321                        | A   | 4103                                | 74                                       | 196  | NLGMLAHAYNSRNLGGQVRTII*G<br>QKFETSHENISRPCLV  |
| 3825                            | 9322                        | A   | 4104                                | 1  | 217  | NIYMFLICFVLIFNFLNELIT*KHIVIF<br>ICWIILSLLLLTLH*FWCHKFHVSW<br>NLEFCIFYFGFKIKLDTFT  |
| 3826                            | 9323                        | A   | 4105                                | 3  | 268  | DRVLLCCPGWSAVSQS*LTAPQTPG<br>FK*SSHLSLPSSWDYRHIPPHLAKK<br>QKYFK*RWSLPVLPRLV*NSWAQAI<br>FPCQPPKGLGLQA  |
| 3827                            | 9324                        | A   | 4106                                | 3  | 263  | DSLALSLRLECSGVISAHCNLCFLGS<br>NNSPAAASRVAGTTGACH*DWLIFE<br>FLVETGFHHIGQAGLELLTEVICLP<br>WPPKVLGLQM  |
| 3828                            | 9325                        | A   | 4107                                | 22                                       | 208  | SFSIQGPLLKPNS*PGVVAHSYNPS<br>TSGGQGRCIT*GQEFESSLVHMAKP<br>HLYQKIQKICR   |
| 3829                            | 9326                        | A   | 4108                                | 122                                      | 339  | EKGFWFCAQGGKNLPGGNSLEPSA<br>SGLKEIFGLNLLNNWE*RGGPKTPG<br>NFWIWKKGGV*PLWPGWG*NPGL  |
| 3830                            | 9327                        | A   | 4109                                | 2  | 210  | KEKIFPSPGFKHPPPPPF*KTPLKGK<br>RIFFSPPRKNWPPQRIFKKAPPSSSSS<br>SSSSSSSAQI*SFNSP   |
| 3831                            | 9328                        | Α   | 4110                                | 3  | 76   | ATSESLDVMASQKR*SRSGSPMARR   |
| 3832                            | 9329                        | В   | 4111                                |  | 2142   | MGGAGSPQVILVSHTPQSASAACEE IAYQVAGVSGNLAPGNQPEKEGRA HQCLECDRAFSSAAVLMHHSKEVH GRERIHGCPVCRKAFKRATHLKEH MQTHQAGPSLSSQKPRVFKCDTCE KAFAKPSQLERHSRIHTGERPFHCT LCEKAFNQKSALQVHMKKHTGERP YKCAYCVMGFTQKSNMKLHMKRA HSYAVAVAMGGTAQCPPGATACL GTAICPSGLRAQRPSNLSVPEAAKP KSGRNRKIEAPTWALSTSKDPQTEG LRNPQTCVQIRSNPFCAFAQGFSLIS ELRTLNCFVGLCDSQSGKQQLGFYS GQPATEAWQKYSLAVCILRSEQEIS ATRLGLKNTNVNKLDGGCGAWNF LGGMSEHNSPPSGRAILLPVVFTEV |

| SEQ ID NO: of nucleo-tide sequence    SEQ ID NO: of peptide sequence   Method  | TIWPGT RMDRRA SAGHCA RGCLED GLETRL LLDISIT OKRKGA RLCTWPP TELNLHP RAQAPD VQEKISK                              |
|--|---|
| nucleo-tide sequence   d   09/770,160   first codon for peptide sequence   l   09/770,160   first codon for peptide sequence   l   l   l   l   l   l   l   l   l   | TIWPGT<br>RMDRRA<br>SAGHCA<br>RGCLED<br>GLETRL<br>LLDISIT<br>OKRKGA<br>RLCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK |
| Sequence   Peptide   Sequence  | RMDRRA<br>SAGHCA<br>LRGCLED<br>CGLETRL<br>LLDISIT<br>EKRKGA<br>RLCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK         |
| Sequence   LPKTGFPIDPQELLQGPIER  | RMDRRA<br>SAGHCA<br>LRGCLED<br>CGLETRL<br>LLDISIT<br>EKRKGA<br>RLCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK         |
| VYTFRSAIVTÄRAVWVRPI  | RMDRRA<br>SAGHCA<br>LRGCLED<br>CGLETRL<br>LLDISIT<br>EKRKGA<br>RLCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK         |
| DLSSATQSASAEKFGGRVS  | SAGHCA<br>RGCLED<br>CGLETRL<br>LLDISIT<br>EKRKGA<br>RLCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK                    |
| LPLPARPVTASVYGRLARI   SYPSALSAQVFLDSPAVGO   FIEAALGPPCRATVTSRGH   KSPGRPCFLSVCLHGSDQQ   AATAKRKSKGGGVNVEGE   EDPPKSWSLAFGPLQEKTT   RCWARCLSHWELPPGPRG   WTGSKSFREQLLTFTLWGV   HQANQGKEAPAYTGLEDS   AV*   3833   9330   A 4112   1   551   3834   9331   A 4113   3   288   CIGLGVVAHACGPGTLGGI   AREFGTSLGNIARSHLYKK   QMSLHLLTLDLTPYISAAF,   DTQLSACTFQLKETPMPSF   3835   9332   A 4114   3   344   VQYYGPAT*VQDGS*GYRT | RGCLED<br>GLETRL<br>LLDISIT<br>KRKGA<br>LCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK                                 |
| SYPSALSAQVFLDSPAVGO   FIEAALGPPCRATVTSRGH   KSPGRPCFLSVCLHGSDQQ   AATAKRKSKGGGVNVEGE   EDPPKSWSLAFGPLQEKTT   RCWARCLSHWELPPGPRG   WTGSKSFREQLLTFTLWGY   HQANQGKEAPAYTGLEDS   AV*   | GLETRL<br>LLDISIT<br>EKRKGA<br>ELCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK   |
| FIEAALGPPCRATVTSRGH   KSPGRPCFLSVCLHGSDQQ   AATAKRKSKGGGVNVEGE   EDPPKSWSLAFGPLQEKTT   RCWARCLSHWELPPGPRG   WTGSKSFREQLLTFTLWGY   HQANQGKEAPAYTGLEDS   AV*   | LLDISIT<br>EKRKGA<br>ELCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK   |
| KSPGRPCFLSVCLHGSDQQ  | KRKGA<br>LCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK  |
| AATAKRKSKGGGVNVEGEEDPPKSWSLAFGPLQEKTT RCWARCLSHWELPPGPRG WTGSKSFREQLLTFTLWGVHQANQGKEAPAYTGLEDS AV*   3833   9330   A 4112   1   551  | RLCTWPP<br>ELNLHP<br>RAQAPD<br>VQEKISK  |
| EDPPKSWSLAFGPLQEKTT RCWARCLSHWELPPGPRG WTGSKSFREQLLTFTLWGY HQANQGKEAPAYTGLEDS AV*  | ELNLHP<br>RAQAPD<br>VQEKISK   |
| RCWARCLSHWELPPGPRG   WTGSKSFREQLLTFTLWGY   HQANQGKEAPAYTGLEDS   AV*  | RAQAPD<br>VQEKISK   |
| WTGSKSFREQLLTFTLWGY  | VQEKISK   |
| HQANQGKEAPAYTGLEDS   |   |
| AV*  | Drugec  |
| 3833         9330         A 4112         1         551           3834         9331         A 4113         3         288         CIGLGVVAHACGPGTLGGI<br>AREFGTSLGNIARSHLYKK<br>QMSLHLLTLDLTPYISAAF,<br>DTQLSACTFQLKETPMPSF           3835         9332         A 4114         3         344         VQYYGPAT*VQDGS*GYR  |   |
| 3834         9331         A 4113         3         288         CIGLGVVAHACGPGTLGGI<br>AREFGTSLGNIARSHLYKK<br>QMSLHLLTLDLTPYISAAF,<br>DTQLSACTFQLKETPMPSF           3835         9332         A 4114         3         344         VQYYGPAT*VQDGS*GYR*  |   |
| AREFGTSLGNIARSHLYKK QMSLHLLTLDLTPYISAAF, DTQLSACTFQLKETPMPSF 3835 9332 A 4114 3 344 VQYYGPAT*VQDGS*GYR*  | CCPIT*  |
| QMSLHLLTLDLTPYISAAF, DTQLSACTFQLKETPMPSF 3835 9332 A 4114 3 344 VQYYGPAT*VQDGS*GYR   |   |
| DTQLSACTFQLKETPMPSF   3835   9332   A 4114   3   344   VQYYGPAT*VQDGS*GYR*   |   |
| 3835 9332 A 4114 3 344 VQYYGPAT*VQDGS*GYR*   | 101 1011  |
|  | ГНМҮМІ  |
| ı ı ı ı ı ı NQIIWEQAVEKIIINKIĞKA   |   |
| QETQMRNAIYQNRLALDY   |   |
| EVCRKFNLINCCLHIDNQG  | QVFEDI  |
| VRDMTKLAHVPMQV   |   |
| 3836 9333 A 4115 6 185 LAGHDRVRL*SQLFRRLRR   |   |
| GGRGCSEP*SHHHTPVWKT  | KLGPV   |
| SKEKKYNQIV   |   |
| 3837 9334 A 4116 1 176 QSIFQICIFFKFTVYMFKTFI   |   |
| FLCGRCWFL*KGLIIFFTLY   | FKTFHH  |
|  | VVII DOT  |
| PQASCLSLPSN*DYRHPPPO   |   |
| FSRDWVSTHVGPGWSRTPI  |   |
| RLGLPKTIRGSEEGIPDEYQ   |   |
| YKL  | DILO I DI   |
| 3839 9336 A 4118 1 112 GKTFKQKQKQEQKKQK*E  | LK*KAM  |
| GKGPLAAGEIKKS  |   |
| 3840 9337 A 4119 3 355 SQSTKNLPSLARDMDIQIQE  | EAQRSP  |
| KRSPPRHIIFELTKVKDKEK   | NPKVPV  |
| EKHQVIYKGIFIRITAETSQA  | ARKKW   |
| DDISKFLKEKKKYRSKILCT   |   |
| N*VEIASHSGSCL*SMILTA   | 'PATVA  |
| 3841 9338 B 4120 638 3862 MKGTCVIAWLESSI GLWRI   |   |
| The second with the second with  |   |
| QGTTQCQRTEHPVISYKEIO   |   |
| FRAKNAADFSQLTFDPGQK<br>ARNYLFRLQLEDLSLIQAVI  | ELVVG   |
| ARNYLFREQLEDESLIQAVI<br>ATKKACYSKGKSKEECQNY  |   |
| VGGDRLFTCGTNAFTPVCT  |   |
| LAEIHDQISGMARCPYSPQF   |   |
| LTAGGELYAATAMDFPGRI  |   |
| SLGILPPLRTAQYNSKWLNI   |   |
| SYDIGNFTYFFFRENAVEHI   |   |
| FSRAARVCKNDIGGRFLLEI   |   |
| MKARLNCSRPGEVPFYYNE  | i   |
| LPELDLIYGIFTTNVNSIAAS  |   |
| NLSAIAQAFSGPFKYQENSF   | CAMA  |
| YPNPNPHFQCGTVDQGLYV  |   |

| SEQ ID                  | SEQ ID              | Me               | SEQ ID NO: | Nucleotide              | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop  |
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| NO: of                  | NO: of              | tho              | in USSN    | location of             | location of last      | codon; /=possible nucleotide deletion; \=possible  |
| nucleo-tide<br>sequence | peptide<br>sequence | d                | 09/770,160 | first codon             | codon for last        | nucleotide insertion)  |
| sequence                | sequence            | 1                |            | for peptide<br>sequence | amino acid of peptide |  |
|                         |                     |                  |            | o que                   | sequence              |  |
|                         |                     |                  |            |                         |                       | NLQDAQKFILVHEVVQPVTTVPSFM  |
| 1                       | }                   | - {              | 1          | 1                       | 1                     | EDNSRFSHVAVDVVQGREALVHIIY  |
|                         | <b>!</b>            | 1                |            |                         |                       | LATDYGTIKKVRVPLNQTSSSCLLE  |
|                         |                     |                  |            |                         |                       | EIELFPERRREPIRSLQILHSQSVLFV  |
| 1                       | }                   | - 1              | 1          |                         | }                     | GLREHVVKIPLKRCQFYRTRSTCIG  |
|                         |                     | ļ                |            |                         |                       | AQDPYCGWDVVMKKCTSLEESLS  |
|                         |                     | 1                | 1          |                         | •                     | MTQWEQSISACPTRNLTVDGHFGV   |
| 1                       |                     |                  | ]          | }                       | ]                     | WSPWTPCTHTDGSAVGSCLCRTRS   |
|                         |                     |                  |            |                         |                       | CDSPAPQCGGWQCEGPGMEIANCS   |
| }                       |                     | 1                | i          |                         | }                     | RNGGWTPWTSWSPCSTTCGIGFQV   |
|                         | ļ                   | -                |            | ļ                       |                       | RQRSCSNPTPRHGGRVCVGQNREE   |
|                         |                     |                  |            |                         |                       | RYCNEHLLCPPHMFWTGWGPWER  |
|                         |                     | -                | ĺ          | ł                       | }                     | CTAQCGGGIQARRRICENGPDCAGC  |
|                         |                     |                  |            |                         |                       | NVEYQSCNTNPCPELKKTTPWTPW   |
| {                       | [                   | -{               | ĺ          |                         |                       | TPVNISDNGDHYEQRFRYTCKARL   |
| 1                       |                     | }                | }          |                         |                       | ADPNLLEVGRQRIEMRYCSSDGTSG<br>CSTDGLSGDFLRAGRYSAHTVNGA  |
| 1                       |                     |                  |            | <u></u>                 |                       | WSAWTSWSQCSRDCSRGIRNRKRV   |
| 1                       |                     | 1                | 1          | (                       |                       | CNNPEPKYGGMPCLGPSLEYQECN   |
|                         |                     |                  | ļ          |                         |                       | TLPCPVDGVWSCWSPWTKCSATCG   |
|                         |                     |                  |            |                         |                       | GGHYMRTRSCSNPAPAYGGDICLG   |
| Ĭ                       |                     |                  |            |                         |                       | LHTEEALCNTQPCPESWSEWSDWS   |
|                         | j                   |                  |            |                         |                       | ECEASGVQVRARQCILLFPMGSQCS  |
| ĺ                       |                     |                  |            |                         |                       | GNTTESRPCVFDSNFIPEVSVARSSS   |
|                         |                     |                  |            |                         |                       | VEEKRCGEFNMFHMIAVGLSSSILG  |
| ļ                       |                     |                  | i          |                         |                       | CLLTLLVYTYCQRYQQQSHDATVI   |
| ĺ                       |                     |                  |            |                         |                       | HPVSPAPLNTSITNHINKLDKYDSVE   |
| ł                       |                     |                  |            |                         |                       | AIKAFNKNNLILEERNKYFNPHLTG  |
| 3842                    | 9339                | A                | 4121       |                         | 104                   | KTYSNAYFTDLNNYDEY*   |
| 3042                    | 7339                | A                | 4121       | 3                       | 124                   | NVNRPVSSNEIKIIIKSLPVKKSP*LN  |
| 3843                    | 9340                | A                | 4122       | 1                       | 197                   | GFNAEFTKHVKNL  |
|                         | 75.0                | ] ^^}            | -1122      | 1                       | 197                   | GFKQLS*LSLPNSWDHRHTTTTPRE<br>MGFHHVGQAGPELPISGDPPAPASQ   |
| !                       |                     |                  |            |                         |                       | SAGITGVSHRTRPRI  |
| 3844                    | 9341                | A                | 4123       | 1                       | 268                   | QLYHLSLQSSRDHRCEPPRPANFLII   |
|                         |                     |                  |            |                         | 200                   | CRDEVYVAQAGLKLPSSSDPPASAS  |
| ĺ                       |                     | 1 1              | ĺ          |                         |                       | KSAGSTGVSHCTQAKFYFF*NLMG   |
|                         |                     | 1 1              |            |                         |                       | EMRGKNNKHLTSFK   |
| 3845                    | 9342                | A                | 4124       | 3                       | 301                   | TEEIHGVLSWNLVPDNYPPYYHPPP  |
|                         |                     | 1 1              |            |                         |                       | PSYIYGAQHLLRLFVKLPEILGKMT  |
|                         |                     | 1 1              |            |                         |                       | FSDKNLKALLKHFDLFLKHLAEYH   |
|                         |                     |                  |            |                         |                       | DDFFPE*AYVAACEAHYCTHNPRSI  |
| 3846                    | 9343                | A                | 4126       | 2                       | 214                   | FFFFKEMGSHYVA*AAVKWLFTGA   |
|                         |                     |                  |            | }                       | j                     | IITL*SLKLLDSNNTPALSECKLIITQ  |
| 3847                    | 0244                | <del>     </del> | 4105       |                         |                       | EASVLKIKKVEIKKTKNRN  |
| 304/                    | 9344                | A                | 4127       | 2                       | 382                   | TMVLSPADKTNVKAA/WGMFLSFP   |
|                         |                     |                  |            |                         |                       | TTKTYFPHFDLSHGSAQVKGHGKK   |
|                         |                     |                  | 1          |                         |                       | VADALTNAVAHVDDMPNALSALS  |
|                         |                     |                  | l          |                         |                       | DLHAHKLRVDPVNFKLLSHCLLVT   |
|                         |                     |                  | ļ          |                         | j                     | LAAHLPAEFTPAVHASLDKFLASVS<br>TVLTSKYR  |
| 3848                    | 9345                | A                | 4128       | 2                       | 253                   | IVLIONIN   |
| 3849                    | 9346                | B                | 4129       | 317                     | 683                   | AHKLRVDPVNFKLLSHCLLVTLAA   |
| J                       |                     | 1-1              |            |                         |                       | HLPAEFTPAVHASLDKFLASVMHR   |
| [                       |                     |                  | [          |                         |                       | ADLQIPLSWSLATGCQKLIEVDDER  |
|                         |                     |                  | -          | 1                       |                       | KLRTFY*  |
| 3850                    | 9347                | A                | 4130       | 1                       | 82                    | VDGWVDGWVDG*MDR*VGRWID   |
|                         |                     |                  |            |                         |                       | The state of the s |

| SEQ ID                            | SEQ ID                  | Me | SEQ ID NO:            | Nucleotide              | Nucleotide   | Amino acid sequence ( X=Unknown; *=Stop   |
|-----------------------------------|-------------------------|----|-----------------------|-------------------------|--|---|
| NO: of<br>nucleo-tide<br>sequence | NO: of peptide sequence |    | in USSN<br>09/770,160 | location of first codon | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|                                   |                         |    |                       |                         |  | GWVDG   |
| 3851                              | 9348                    | A  | 4131                  | 1                       | 240  | ASTFFFFSIDRVLLCCPGWTRTPGFI*<br>SSCFGLPKCWDYRSEPPCLATFFFIK<br>KKYKEEHFILILCQIVNMILILYQPT<br>Q  |
| 3852                              | 9349                    | A  | 4132                  | 3                       | 180  | REPPLPAANFVFFVEMRSHHVRQA<br>GPEPPSSSDLPASASQSAGITGVHCH<br>AWP*YTYL  |
| 3853                              | 9350                    | A  | 4133                  | 2                       | 238  | SPCAGILEDDRADYQGTRKTSEYSS<br>VTP*EACHT*EGPIAFISWP*KVPIQL<br>TFNERNRARGFQVPYGTYDRGLPG<br>TH  |
| 3854                              | 9351                    | A  | 4134                  | 7                       | 259  | IVTAALFTLAPNQK*SKYPSSGKLIN<br>KFWYIYKME*TSISNKQVSTTYSMQ<br>AWVNLKSITLS*RHKGVYII*SHLYD<br>ILEKTEL  |
| 3855                              | 9352                    | A  | 4135                  | 141                     | 309  | AFDEAIAKLYSVNE*SYKGSTVIMQ<br>LVRVNLAVSATSTGFIVSFVFTYPIIP<br>CYLQ  |
| 3856                              | 9353                    | A  | 4136                  | 113                     | 205  | HNLLMLFDLCLLYWL*LIFLIHELAE<br>NLLN  |
| 3857                              | 9354                    | A  | 4137                  | 3                       | 215  | FETGSCSVTQAGVHWRDHSSLQP*S<br>LGFKQPSNLSLPSSWDYRCTPPHLA<br>NLCIFCKDRVTSYCPGWHPV  |
| 3858                              | 9355                    | A  | 4138                  | 3                       | 386  |   |
| 3859                              | 9356                    | A  | 4139                  | 1                       | 255  | IRLMKEGRMKGQAFIGLPNEKAAA<br>KALKEANGYVLFGKPMVVQFARSA<br>RPKQDPKEG*RKKRTWLFNKVGK<br>WELAPKPMGLDFSL   |
| 3860                              | 9357                    | A  | 4140                  | 78                      | 153  |   |
| 3861                              | 9358                    | A  | 4141                  | 1                       | 293  | LRLPGSSHSPASVS*VAGIAGACHH<br>AWPNFCVFSRDQGFTHVGRAGLGA<br>PDPLDPALPWPSPKVMGFTRCEAHP<br>CPSPRMRFLKYVSVPVSMVGRPE                               |
| 3862                              | 9359                    | A  | 4142                  | 3                       | 48   | PLPRKSVEPGGGTKYKTEQKKRQE<br>RRDRGSK*RKQQKAATSEEQQRK*<br>AKTQEDGGTKRSPDGEEDPEKKIHR<br>NREGTRKKGQDPRNGVNNKNREK<br>EQN*RTHTS*SQKVRRTRRGNEV     |
| 3863                              | 9360                    | A  | 4143                  | 1                       | 276  | GTRDSV*GGLKLIPIFLMDFWKEPL<br>GPALAHELQYPGRD*SSDIWIRTAA<br>SLHTLPIVGPHLLGDLASFCTLLTPD<br>PCQHVPRSRADTVEMG                                    |
| 3864                              | 9361                    | A  | 4144                  | 1                       | 154  | LVWS*EASKIPGGAEAAHPPTTF   |
| 3865                              | 9362                    | A  | 4145                  | 2                       | 231  | FFFESGSRSVTQAGVQ*HSLGSLQPL<br>PPRFK*FSCLSLPSSWDYTHVPTRPA<br>NFCIFSGDGVSSCWPGWSRTPNLR  |
| 3866                              | 9363                    | A  | 4146                  | 1                       | 303  | GTRGSVKEGAKYTSHRDMGLSTFD<br>RDADQWKENCANVYG*GCRYNNC<br>QAANLNGIYYPGGSYDPRNNSAYE<br>TDNGVVWVSFTGAHYSLRAARMKI<br>RPLVTQ                       |
| 3867                              | 9364                    | A  | 4147                  | 3                       | 372  | HAGLGAHPLHHPVIQQEGFLPAPRG<br>FGYRSEVD*IRIPAESTGQNSQCQLR<br>K*KDDSYFHCGYFCGCVCTCRGRL<br>QSSTSHQCQAAL*LLLPVCLTMLRC<br>ISSLIYT*NLKTVHSVRLNFIYN |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|-------------|--|---|
| 3868  | 9365                                    | A   | 4148                                | 2           | 98   | RRPFFFFFFASCI*NLISPNVQLSNFT<br>CILRN  |
| 3869  | 9366                                    | A   | 4149                                | 1           | 230  | SGRPFLFFFQGKERVYFIPVVVLFYT<br>VVVQ*LRKNVVRWQKTMEPPRSW<br>LMQLGHTEEGPGYPLLGETETKLFR<br>TA  |
| 3870  | 9367                                    | A   | 4150                                | 1034        | 2354   | DRVLAPVAQTGVQWHDLSSLQPPP PGFKRFFCLSLPSSWDYRRPP*RPAN FC*FLVETGFRHVGQAGLGLLTSGD PPASASQSSRITGVSHRARTMGLSR ALYRIPALKVWLLINVELKKQMMA HVDVTCLINKSPSLTRPMGKRLSAE TGKGQKEKQKQTGAGCAVLPSRGF PPKAHHGRQPLTLAPSPPPRTFSPSP PHTHTHTHTCSPICPRQSRSFQGPR MPDPDPGDATCGAGPGGSAPARAA GPRSAPRRAKARVQARVQARAQAR WVRALTLLAAHPRLQPVPARIARR AAQSSSSPPPATPAKSPPPEASGAAA PPALGLERFPGASPNHLTRSTCALR HVGAGGAALGGPGAPRLPHRLEVG REEGRGRRGDGLGHGGCVEPAWEP GWRLPSTIKLFIKSKVSSEALEMPFL CICEHLLSYTYSRKHRNVI |
| 3871  | 9368                                    | A   | 4151                                | 387         | 478  |   |
| 3872  | 9369                                    | A   | 4152                                | 757         |  | HKENRNSLELRQNQSSPIWALPLHG LERKGLGRDHSSPHLPLLPSERL*K ASASQGPEWCCPSPRAAGPESGRCD QLWESPMASATWKPYRPQPSRSPQ RQRVVLPPLVKGKTPPLFKLLQESV PGDLLPGELSL*PWEKPI*NNFAFNF SQQCKGMFKFPQFRSLARGSNPTSL TGVGPLPLPREFPGEEREGAPQIFKQ NTANGLGPSA*MRAGTAQGCWES* GGNTAPGPGAVNTAN   |
| 3873  | 9370                                    | A   | 4153                                | 32          | 255  | SRRHDSLHRVTFCISDPHYRKWTNP<br>DGTTSKIFGFVAKKPASPWENVCHL<br>FAKLDPY*PAGAIVTFITNVPTAP  |
| 3874  | 9371                                    | A   | 4154                                | 1           | 265  | CDTVLLCHPGWSAVAQSQLTTTSA<br>SQIKRFSCLNLPSSQNTRRASPHPAN<br>FFYF**R*GFTMLVRLVSNSCPQVIH<br>PPLPPKVLGLQA  |
| 3875  | 9372                                    | A   | 4155                                | 92          | 333  | FLSFFFF*MGCHSVTQCGVKWHDLS<br>SLQPPHLTFKWFSRLSLLSGWDYRC<br>LAQHQASCCIFSRDGISPF*PCWYQT<br>PDLR  |
| 3876  | 9373                                    | A   | 4156                                | 16          | 181  | ICSLPSTVDVIEFLDYYVKVSLKL*SI<br>IKICDSDKHTHIHTYGYVYIFSPPGK<br>PV   |
| 3877  | 9374                                    | A   | 4157                                | 1           | 355  | TVSLSCSVAQAGVQWHNLGSLQPL<br>PPGFK*FSCLSLPSSWDHRCPPPCLA<br>NFCIFL*RWGFARFCHVGEAGLELL<br>TSSDLHTSDSQSAGIIGTSHHAWPH<br>LLVLTCVCAHTLFRHFYL  |
| 3878  | 9375                                    | A   | 4158                                | 1           | 194  | FFFFFTISYIFIYTLTTCWEFKQLAGN I/HL*GTVAFFYLKLLKLQDRLTNSF SSATTNVLAENS   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----------|-------------------------------------|---|--|---|
| 3879  | 9376                                    | A        | 4159                                | 112   | 270  | ILGNSLFKNYK*YLSPAAVTHACNP<br>NTLGGQGGPVT*AQEFETSLGNIVR<br>PCL   |
| 3880  | 9377                                    | A        | 4160                                | 1   | 211  | RFSCLSLLSS*DYRRVPPRPAIFVFL<br>VETRFHYVGQDGLDFLTSCSARLYL<br>PKCRDYRRELLCPAPASLL  |
| 3881  | 9378                                    | A        | 4161                                | 2   | 253  | ETDSCSVAQTRVQWYDLGSLQQPP<br>PRFKRFSCLSLPNSWDYKCVPPTPI*<br>FFLFLVEMEFHCAGQADLELLGSGD<br>PPASASPK   |
| 3882  | 9379                                    | A        | 4162                                | 198   | 276  | KPFMAQCSF*IYEAIFSCTSSEIRY   |
| 3883  | 9380                                    | A        | 4163                                | 3   | 193  | HFGRPRRADCLRSSV*DQPGQHGET<br>PSTKNTKISQAWWWVPVVPTT*EA<br>EAGESLEPGGQRLQ   |
| 3884  | 9381                                    | A        | 4164                                | 2   | 515  | DTEKMSPWDMELIPNNAVFPEELG<br>TRVPLTDGECKTLIYKPLDGEWGTN<br>PRDEECERIVAGINQVMTLDIASTFV<br>APVDLQAYPMYCTGVAYPTDLSSI<br>KQRLENRFYRRVSSLMWEVRYIEH<br>NTRTFNEP*KPNGRPAKSGTDLLLH<br>FIKDQTCYNIIPLYNSMKKKVLS |
| 3885  | 9382                                    | A        | 4165                                | 3   | 418  | HEADKTNVVTGKTEVGAHAGEYG<br>AQALERMFLSFPTTKTYFPHFDLSH<br>GSAQVKGHGKKVADALTNAVTRIK<br>EMRNALCTLSDLYAHKLLGDSCTL<br>*LLSHCMLVTLAN*PSSEFTPVAHTL<br>VAKILAFVSTELTSKY                                      |
| 3886  | 9383                                    | A        | 4166                                | 1   | 191  | CLETECRYVSQAGMQWHYPG*LQP<br>*PPGYKLSSHLSLPSSWDYRHVPEH<br>PTNFVYFFVERKSH   |
| 3887  | 9384                                    | A        | 4167                                | 3160  | 3732   |   |
| 3888  | 9385                                    | A        | 4168                                | 2   | 326  | PRSGSESFSCQLSPFFFFFGDRVSLC<br>GPG*SAVV*LQLM*PGPPKLKQSSC<br>LCLPSSWDHRWAAPHLA*FFKFFFI<br>ETGSYHLPQLVSNPWAQASLLPWP<br>PKVLGLQV  |
| 3889  | 9386                                    | A        | 4169                                | 2   | 163  | LIFFVFIVGTGFHHVGQAGLECLTSS<br>DPSASASQSAGITGVNHHTRPPSAF<br>GC*T*GTGFHHVGQAGLECLTSSDP<br>SASASQSAGITGVNHHTRPPSAFGC   |
| 3890  | 9387                                    | A        | 4170                                | 126   | 348  | HISIFETGSYSVTQAGAQWLDHGSL<br>QP*PPGLK*SSCLSLPSSWDYRHMPP<br>CPANFYIFCRDGVSPRCSGCNF   |
| 3891  | 9388                                    | A        | 4171                                | 1659  | 1970   | MLKGGAKIRSRRKTGVSHSLHSDL<br>NFFFFWDKSIALSHRLEYNGAISAH<br>CNLRLLGSSDSPASAS*VARITGMR<br>HHTQLILVFFSRNGVLPCWPGWSRT<br>PDLR   |
| 3892  | 9389                                    | A        | 4172                                | 153   | 278  | MRPDTVAHTCNPSTLGGQGGRIT*T<br>HEFETSLGDMMKPYLYK  |
| 3893  | 9390                                    | A        | 4173                                | 3   | 254  | LQYLVFISSKAWPS*KLEDGET*SA<br>GENNNYNTIL*LDLFSHREGKWSKI<br>PYV*AFFALQNNRKLCQQCIIDLALI<br>AVISSQT   |
| 3894  | 9391                                    | A        | 4174                                | 3   | 225  | SLTHLTATSILLK*FSCLGLPSSWDH<br>RCPPPRLANFFAFLVETDFTMLARL<br>V*NS*PEVIRSPRPSKVLGLRA   |

| SEQ ID                            | SEQ ID                  | Ma  | SEQ ID NO:            | Muslootida  | Nucleatide  | IAi  |
|-----------------------------------|-------------------------|-----|-----------------------|---|---|--|
| NO: of<br>nucleo-tide<br>sequence | NO: of peptide sequence | tho | in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide | Nucleotide<br>location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)                    |
|                                   |                         |     |                       | sequence  | peptide<br>sequence   |  |
| 3895                              | 9392                    | A   | 4175                  | 1   | 344   | GGALSGGTPGFSPSPPGKTAAPGQS<br>GNPPGGF*RVPSPGGSQRGGFPGNT<br>PAPGPLPSSSSSSKGGFGDCTPRDKS<br>RKGGKPPFS*GGFFPQGSAVPKHLA<br>APTNRYTSFHPQK |
| 3896                              | 9393                    | A   | 4176                  | 2   | 201   | QPGQYGKHPVLIKNSKIKPFWGDPP<br>VVPNAREG*A*KMVEPGKVRVQSA<br>QIKALEFNLGPKKKVPF   |
| 3897                              | 9394                    | A   | 4177                  | 39  | 225   | KSIQSYAI*YNVTCGFFKSALNGVG<br>SVAFCSHHAEHFLGFVFINHEKSFQ<br>FCQMLLLCMTR  |
| 3898                              | 9395                    | A   | 4178                  | 322   | 451   | INSTDWAPWLTLVISALWEAEAA/G<br>SRGQEIETILANTVKPRLY   |
| 3899                              | 9396                    | A   | 4179                  | 234   | 383   | BROQUILITE FRICTIVE RET  |
| 3900                              | 9397                    | A   | 4180                  | 86  | 216   | KQTLGQAWWLTPIIPALWEAEVGR   |
| 3901                              | 9398                    | A   | 4181                  | 1   | 4123  | S*DQEIETILPNTVKPHRY MEEVEEDRFKENLEGALAGQLLGD   |
|                                   | 7370                    |     | 4101                  |   | 4123  | EATQALQVLAVELDVVVPGALHPQ<br>RLHRLGAALVERQPVREVDHLVLP<br>AVDDEHGRRDLGHLLDVREGVEA  |
|                                   |                         |     | i                     |   |   | VGLLGVAEGDAHARGERRVQHHR<br>GTLVARGQVHGGHRADALPVQDD   |
|                                   |                         |     |                       |   |   | AVRADAVPGGAGAGSAAASNARA  |
|                                   |                         |     |                       |   |   | PFPPAGVPGPSSGCDPPVSPLSQVSA<br>HWELCGPHILNASYLPARVRKPFLV  |
|                                   |                         |     |                       |   |   | HWPGQRTLFLPAALAHPLGHEEFR   |
|                                   |                         |     |                       |   | 1   | QLCPQMSPPNFGLSESPRPVRCQCN<br>PGQHRGWWLRRWHPLPPAPSLGSG  |
|                                   |                         |     |                       |   |   | QVLGHLSTTSSHPGAPSPPGHWCAA  |
|                                   |                         | 1 1 |                       |   |   | PDPADPAPVTRPPRAQSQARGTHLP<br>PCPCRDPTTLLPHALGSDPRQTPSC   |
|                                   |                         | 1   |                       | !   |   | KAGAWAGRSPQLPPGCHHSNERDT   |
|                                   |                         |     |                       |   |   | SPVEALGTLWPPPHGSGPRFLQDKG  |
|                                   |                         | 1 1 |                       |   |   | AAGQMAEQTELRAGHGRMAKLRS<br>HRASWASPPDLDAAASPHLAPSAA  |
|                                   |                         |     |                       | 1 1   |   | SADGLPATRAQTPRPPPTPSRQAELP   |
|                                   |                         |     |                       |   |   | PGSPSPGAQGLPGGVDVGIEVPLGR  |
|                                   |                         |     |                       |   |   | PARAGTVAGGVVGEDVAVEAGAQ<br>ANVEAAHLAQVHGIAVREEDRVPG  |
|                                   |                         | 1 1 |                       | }   |   | TRHAANIHAGDTVAAGALGGEDLD   |
|                                   |                         | 1   |                       | }   |   | GVQLALAVLEVGTLRQGFWWTLR  |
|                                   |                         | 1 1 |                       |   |   | GTDVETYPFSAPRAASHGVGRHEEL<br>PDPTGPCGGRLLSLTIHGVTIRYHAL  |
|                                   |                         |     |                       |   |   | LWARGPIMSKSQVLGEWEPVQGGK   |
|                                   |                         | 1 1 |                       |   |   | SSENDKWTMSDPGAEAPTCSRAAS   |
|                                   |                         |     |                       |   | -   | GVDKEQQGRWQGLWNSHIKPLKIR   |
|                                   |                         |     |                       |   |   | MVKQNNIIPGETQILLRFTGWESKV<br>NAKKQLPVGIKCEPMDQENEQTGG  |
|                                   |                         |     | ı                     |   |   | HETDGHRIVSVLIHFPLISILSYATW   |
|                                   |                         |     | ·                     |   |   | GLSLLECIPGSPVCTLLVRFSNVGTR   |
|                                   |                         |     |                       |   |   | WSLEVRGSPCGFGSNKVCGVMTPEI<br>KMVCVCEGKAGKAVGSGGVEGTK   |
|                                   |                         |     |                       |   | ļ   | EVSTGNAEGPVRHEAVDGGVHLAF   |
| ļ                                 |                         |     |                       |   |   | ALLQGLLWSLLLGPPGLAGWGGGE   |
| j                                 |                         |     |                       | ]   |   | LDAVPDSTSSATNVSMVVSAGPWS<br>SEKAEMNILEINEKLRPQLAENKQO  |
| }                                 |                         |     |                       |   | ļ   | FRNLKERCFLTQLAGFLANRQKKY   |
|                                   |                         |     |                       |   |   | KYEECKDLIKFMLRNERQFKEEKLA  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|---|--|
|   |   |   |                                     |                         |   | EQLKQAEELRQYKVLVHSQERELT QLREKLREGRDASRSLNEHLQALLT PDEPDKSQGQDLQEQLAEG\LDWH STLSKSSAQKMTKMRMKMFK/CEE DEKVLESSAPREVQKAEESKVPEDS LEECAITCSNSHGPCDSIQPHKNIKIT FEEDKVNSSLVVDRESSHDGCQ/EC SKHSPSPWPHLFCHKRQHGG/DQPA LCPARRQR*TF*KSMRNCA/HQLAE KKQQFRSLKEKCFVTQVACFLAKQ QNKYKYEECKDLIKSMLRNERQFK EEKLAEQLKQAEELRQYKVLVHSQ ERELTQLREKLREGRDASRSLNEHL QALLTPDEPDKSQGQDLQEQLAEG CRLAQHLVQKLSPENDEDEDEDVQ VEEDEKVLESSAPREVQKAEESKVP EDSLEECAITCSNSHGPCDSIQPHKN IKITFEEDKVNSSLVVDRESSHDGC QDALNILPVPGPTSSATNVSMVVSA GPLSSEKAEMNILEINEKLCPQLAEK KQQFRSLKEKCFVTQVACFLAKQQ NKYKYEECKDLIKSMLRNERQFKE EKLAEQLKQAEELRQYKVLVHSQE RELTQLREKLREGRDASRSLNEHLQ ALLTPDEPDKSQGQDLQEQLAEGC RLAQHLVQKLSP |
| 3902  | 9399                                    | В | 4182                                | 1                       | 799   | MLQIPKQQNEKYQVPQFDQSTIKN IESAKGLDVWDSWPLQNADGTVAE YNGYHVVFALAGSPKDADDTSIYM FYQKVGDNSIDSWKNAGRVFKDSD KFDANDPILKDQTQEWSGSATFTSD GKIRLFYTDYSGKHYGKQSLTTAQI HFPLISILSYATWGLSLLECIPGSPVC TLLVRFSNGGPPMDPGSERKGFCRF RNHHQTGFSPAGANQRGPLAATLS GPGGEGQSAVARLTGEKKNHPGAQ YANRLSPRVGRFINAAGTTX*  |
| 3903  | 9400                                    | A | 4183                                | 260                     | 387   | REVGRVRWLTPVIPARWEAEVGRS<br>*GQEIKTILANTVKPRLY   |
| 3904  | 9401                                    | Α | 4184                                | 1212                    | 1442  |  |
| 3905  | 9402                                    | A | 4185                                | 3844                    | 4180  | KYKKCVGCGGRSL*S*LLRRLRQEN<br>RLSPGGGDCSEPRSSHCTPAWVTER<br>/GDSVSKKKKKNLLTWLVNKLCGP<br>CRAWWLTPVIPALWEAEAGRSRGQ<br>EIETILANTVKPRLY  |
| 3906  | 9403                                    | A | 4186                                | 8                       | 385   |  |
| 3907  | 9404                                    | A | 4187                                | 2                       | 284   |  |
| 3908  | 9405                                    | Α | 4188                                | 1477                    | 1697  |  |
| 3909<br>3910                                | 9406                                    | A | 4189                                | 17                      | 837   | GKVVLELERFLPQPFTGEIRGMCDF<br>MNLSLADCLLVNLAYESSVFCTSIV<br>AQDSRGHIYHGRNLDYAFGNVLRK<br>LTVDVQFLKNGQIAFTGTTFIGYVG<br>LWTGQSPHKFTVSGDERDKGWWW<br>ENAIAALFRRHIPVSWLIRATLSESE<br>NFEAAVGKLAKSPLI\ADVNYIAGG<br>TCPREGVVVTRNRDGPGDIGPLNPL   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|--|
|   |   |     |                                     |   |  | NGAWLRVETDYYHWKPAPKEDDR<br>RTSA\IKALNATGQANLKLEALFQIL<br>TVVPVYNNLTIYTTAMSAGSPYKY<br>MTRIRNPS  |
| 3911  | 9408                                    | A   | 4191                                | 653   | 727  |  |
| 3912  | 9409                                    | A   | 4192                                | 26  | 161  |  |
| 3913  | 9410                                    | A   | 4193                                | 3   | 186  |  |
| 3914  | 9411                                    | A   | 4194                                | 28  | 186  |  |
| 3915  | 9412                                    | A   | 4195                                | 356   | 428  |  |
| 3916  | 9413                                    | С   | 4196                                | 35  | 430  | MKSCRXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  |
| 3917  | 9414                                    | A   | 4197                                | 213   | 394  |  |
| 3918  | 9415                                    | A   | 4198                                | 28  | 123  |  |
| 3919  | 9416                                    | A   | 4199                                | 1578  | 1835   | SNKSLPHNCIPPQMRNYSRGNLLQY<br>IDYVQLHRNLYAGEIYFHC*RKSAL<br>CNSSWREGAVGCLPMDFPRLHLSL<br>SPSSLHCRNKP  |
| 3920  | 9417                                    | A   | 4200                                | 213   | 305  |  |
| 3921  | 9418                                    | A   | 4201                                | 1715  | 1850   |  |
| 3922  | 9419                                    | A   | 4202                                | 4016  | 4315   |  |
| 3923  | 9420                                    | A   | 4203                                | 28  | 239  |  |
| 3924  | 9421                                    | A   | 4204                                | 7   | 216  |  |
| 3925  | 9422                                    | A   | 4205                                | 1   | 576  |  |
| 3926  | 9423                                    | A   | 4206                                | 1   | 500  |  |
| 3927  | 9424                                    | A   | 4207                                | 1   | 1266   |  |
| 3928  | 9425                                    | A   | 4208                                | 1   | 162  |  |
| 3929  | 9426                                    | A   | 4209                                | 1   | 229  |  |
| 3930  | 9427                                    | A   | 4210                                | 197   | 416  |  |
| 3931  | 9428                                    | A   | 4211                                | 1   | 131  |  |
| 3932  | 9429                                    | A   | 4212                                | 76  | 274  |  |
| 3933  | 9430                                    | A   | 4213                                | 295   | 2530   | RPATMAARPLPVSPARALLALAG ALLAPCEARGVSLWNEGRADEVVS ASVRSGDLWIPVKSFDSKNHPEVLN IRLQRESKELIINLERNEGLIASSFTE THYLQDGTDVSLARNYTVILGHCY YHGHVRGYSDSAVSLSTCSGLRGLI VFENESYVLEPMKSATNRYKLFPA KKLKSVRGSCGSHHNTPNLAAKNV FPPPSQTWARRHKRETLKATKYVE LVIVADNREFQRQGKDLEKVKQRLI EIANHVDKFYRPLNIRIVLVGVEVW NDMDKCSVSQDPFTSLHEFLDWRK MKLLPRKSHDNAQLVSGVYFQGTT IGMAPIMSMCTADQSGGIVMDHSD NPLGAAVTLAHELGHNFGMNHDTL DRGCSCQMAVEKGGCIMNASTGYP FPMVFSSCSRKDLETSLEKGMGVCL FNLPEVRESFGGQKCGNRFVEEGEE CDCGEPEECMNRCCNATTCTLKPD AVCAHGLCCEDCQLKPAGTACRDS SNSCDLPEFCTGASPHCPANVYLHD GHSCQDVDGYCYNGICQTHEQQCV TLWGPGAKPAPGICFERVNSAGDPY |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | GNCGKVSKSSFAKCEMRDAKCGKI<br>QCQGGASRPVIGTNAVSIETNIPLQQ<br>GGRILCRGTHVYLGDDMPDPGLVL<br>AGTKCADGKICLNRQCQNISVFGV<br>HECAMQCHGRGVCNNRKNCHCEA<br>HWAPPFCDKFGFGGSTDSGPIRQAG<br>KEARQEAAESNRERGQGQ\EPLGSQ<br>EHAST\ASLTLI   |
| 3934  | 9431                                    | A | 4217                                | 2                       | 119  |   |
| 3935  | 9432                                    | A | 4218                                | 2                       | 147  |   |
| 3936  | 9433                                    | A | 4219                                | 10                      | 216  |   |
| 3937  | 9434                                    | A | 4220                                | 245                     | 455  |   |
| 3938  |   | A | 4221                                |                         | 2867   | MIFPAESSCALPQEGSAGPGSPGSAP PSRKRSWSSEEESNQATGTSRWDG VSKKAPRHHLSVPCTRPREARQEAE DSTSRLSAESGETDQDAGDVGPDPI PDSYYGLLGTLPCQEALSHICSLPSE VLRHVFAFLPVEDLYWNLSLVCHL WREIISDPLFIPWKKLYHRYLMNEE QAVSKVDGILSNCGIEKESDLCVLN LIRYTATTKCSPSVDPERVLWSLRD HPLLPEAEACVRQHLPDLYAAAGG VNIWALVAAVVLLSSSVNDIQRLLF CLRRPSSTVTMPDVTETLYCIAVLL YAMREKGINISNSKKTIQLTHEQQLI LNHKMEPLQVVKIMAFAGTGKTST LVKYAEKWSQSRFLYVTFNKSIAK QAERVFPSNVICKTFHSMAYGHIGR KYQSKKKLNLFKLTPFMVNSVLAE GKGGFIRAKLVCKTLENFFASADEE LTIDHVPIWCKNSQGQRVMVEQSE KLNGVLEASRLWDNMRKLGECTEE AHQMTHDGYLKLWQLSKPSLASFD AIFVDEAQDCTPAIMNIVLSQPCGKI FVGDPHQQIYTFRGAVNALFTVPHT HVFYLTQSFRFGVEIAYVGATILDV CKRVRKKTLVGGNHQSGIRGDAKG QVALLSRTNANVFDEAVRVTEGEF PSRIHLIGPEEERRKREYPPGLGALE GRTQVTGTRKKQAQSESGTRFPPEK GELVLLSSHDEGENLVIKDKFIRRW VHKEGFSGFKRYVTAAEDKELEAKI AVVEKYNIRIPELVQRIEKCHIEDLD FAEYILGTVHKAKGLEFDTVHVLD DFVKVPCARHNLPQLPHFRVESFSE DEWNLLYVAVTRAKKRLIMTKSLE NILTLAGEYFLQAELTSNVLKTGV VR\CCVG\QCNNA/LSPVDTVLTMK KL\PITY*ATGK\ENKGGYLCHSCAE QQHRDPWRFLTASPEQVRAMEPHF |
| 3939  | 9436                                    | A | 4222                                | 57                      | 302  | GGTSYCPRHEALLFLVF   |
| 3940  | 9437                                    | A | 4223                                | 1                       | 550  | DAHIIGRIESYSCKMAGDDKHMFK<br>QFCQEGQPHVLEALSPPQTSGLSPS<br>RLSKSQGGEEEGPLSDKCSRKTLFY<br>LIATLNESFRPDYDFSTARSHEFSRE<br>PSLKLVGLNAVNCSLFSAVREDFKD<br>LKPQLWNAVGRGDLPGLKCDIYS\Y  |

| SEQ ID                            | SEQ ID                        | Me  | SEQ ID NO:            | Nucleotide              | Nucleotide   | Amino acid sequence ( X=Unknown; *=Stop   |
|-----------------------------------|-------------------------------|-----|-----------------------|-------------------------|--|---|
| NO: of<br>nucleo-tide<br>sequence | NO: of<br>peptide<br>sequence | tho | in USSN<br>09/770,160 | location of first codon | location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|                                   | <del> </del>                  |     |                       | <del>-</del>            | sequence   | NIDDI DODDODED GOLUMANIA MANAGANIA  |
|                                   |                               |     |                       |                         |  | NPDLDSDPSREDGSLWSFNYFFYNK<br>RLKRNRLL   |
| 3941                              | 9438                          | A   | 4224                  | 11                      | 511  | GRTRSIAGEETTQRPGPNCGGNCLC<br>LHTLAINMRICYSQTTPFHPLRLKG<br>QRWPF\FSSLELFPVGFPRAHLLVQS<br>TLPKPRPERAFTAPSLFPVTLGFCLG<br>RILCQRLLLCPSCLATALSINGYSRT<br>QECQSWKGRDTGLHKGKLLEALG<br>GTEGFGDRARAKIEDS   |
| 3942                              | 9439                          | A   | 4225                  | 1                       | 279  |   |
| 3943                              | 9440                          | A   | 4226                  | 1011                    | 1322   |   |
| 3944                              | 9441                          | A   | 4227                  | 3                       | 468  | TPLHVYNEVMSVGQKYGIRNAGYY ALRSLRIEKFFAFWGQDINNLT\TPL ECGRESRVKLEKGMDFIGRDALLQ QKQNGVYKRLTMFILDDHDSDLDL WPWWGEPIYRNGQYVGKTTS\SAY SYSLERHVCLG\FVHNFSEDTGEEQ VVTADFINRG   |
| 3945                              | 9442                          | A   | 4228                  | 1                       | 1236   |   |
| 3946                              | 9443                          | В   | 4229                  |                         | 1742   | MKRDNSGGCLPAPASAWPARPRQQ AEWRALTRGPANHCGIISTLGEPPE TPLIGLRTFQCCRLVTDGRVLAGTV SSEPTDGFRSPAPGPGRRTSAMVLL KLGKTPGEFFPFLGSSSQPPSHELNI GKRLDDTKILPGNMKDNFWEMGD TGPCGPCSEIHYDRIGGRDAAHLVN QDDPNVLEIWNLVFIQYNRFGNCVE LQASAAFNWNNQRCKTRNRYICQF ADLRRNLNIINDDITGRVHKDRKLL TGDSPFAANALGKLAAQEMMAAY AVSLPKLTALLRVFSTVVRSIGERFS PIRVLRLLRHTTPNYIYQRLIPYVCV LPTTELSINLNMLTENDIPLFRALFL NNITDADARVLLQKRPREGWLTTD AFLYWAQQDFSGVKPLVAQHWEW MTFSADSVSSVHTLTDDLPLESLAD QPGAGNVHLLIPPEGLLYRSLTLPN AKYKLTAQTLQWLAEETLPDNTQD WHWTVVDKQNESVEDCLIPLFGKP QGKGCLEKSVWAAGRPFSYAGDK NRQLTRYSDTRWHEDSVRNRWFSV MVGPSVRVNEWFSAYAMAGMAYS RVSTFSGDYLRVTDNKGS* |
| 3947                              | 9444                          |     | 4230                  | 1                       | 638  |   |
| 3948<br>3949                      | 9445                          |     | 4231                  | 1377                    | 1746   |   |
| J7 <del>4</del> 7                 | 9446                          | В   | 4232                  | 1                       | 1716   | MSQYYQPQRPPEHIELDSHAKFFPH HHLQVADSAAHLAASPLRRTHRAL TWAQALPQEEGSGAPSPPGAPSPTP KSFGRTMSASAVFILDVKGKMESC YVVQDVLNSWSPAIPLLQPPKVSDD SGGHHIEECQCLPVYSFLYKTIEVGI LRILQGAGGGEHPDNFVIVYELLDE LMDFASRRPPTARSCRIHHSAEQQA GDGQVTGAPTVTNAVSWRSEGIKS MQRQRPSERNRRYHQAQVFLSGMP ELRLGLNDRVSSSSLAAKGQFKKSQ WPTVWRYLCLYPAMRLPQIQDQCG   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         |  | QRQVCAGRNVVIWSIKSFPGGKEYL MRAHFGLPRWKRKRWRAGPPSGSS LDPLLHRLWDPGPIMKIIEKSGYQA LPWVRTSPRVAIPTSYQLEGRRDGG LNTGFLTAPDADFRGRAGEEPAGR AGVSGWGAGTESSAAGCTAAAPRE GCSASARRLLRADSAGLGRAGGFA GRQCRHAAGGGCAGDRLSGAAAR GDVQECAAFCTGSWCIPTPSTLRQD GAAGFIVPPQSPFEGHDVWQHRHR PELLKQGASPNVQDTSGTVQSMTQ PALDSWTP*  |
| 3950  | 9447                                    | A | 4233                                | 1                       | 372  |  |
| 3951  | 9448                                    | В | 4234                                | 48                      | 1158   | MSASAVFILDVKGKPLISRNYKGDV AMSKIEHFMPLLVQREEEGALAPLL SHGQVHFLWIKHSNLYLVATTSKN ANASLVYSFLYKTIEVFCEYFKELE EESIRDNVVIVYELLDELMDFGFPQ TTDSKILQEYITQQSNKLETGKSRVP PTVTNAVSWRSEGIKYKKNEVFIDV IESVNLLVNANGSVLLSEIVGTIKLK VFLSGMPELRLGLNDRVLFELTGRS KNKSVELEDVKFHQCVRLSRFDND RTISFIPPDGDFELMSYRLSTHVKPLI WIESVIEKFSHSRVEIMVKAKGQFK KQSVANGVEISVPVPSDADSPRFKT SVGQRQVCAGEKRRYFGVLSLSGG AREYLMRAHFGLPKCEKERX* |
| 3952  | 9449 .                                  | В | 4235                                | 153                     | 458  | KKDLSLEEIQKKLEAAEERRKSHEA<br>EVLKQLAEKREHEKEVLQKAIEEN<br>NNFSKMAEEKLTHKMEANKENRE<br>AQMAAKLERLREKDKHIEEVRKTK<br>NPRPC*   |
| 3953  | 9450                                    | A | 4236                                | 3                       | 182  | NFIG-C.  |
| 3954  | 9451                                    | A | 4237                                | 49                      | 607  | NSARGLSLSQLIVQNTLPVACLLFT MASSDIQVKELEKRASGQAFE\LILS PRAKEFVPEFPLSPPKEEGFFPGGKF REN*EAA\EERRQSP*SCSS*RQLAE KLRAPRKKCFQKAIEENNNFQ*NGQ KRKLTPHKMEA\NKETPERPQMA\A KLEPFAEEKDKAH*KKCGKNKES\K DP\ADETEAGLI  |
| 3955  | 9452                                    | A | 4238                                | 1                       | 356  | TELQQEQLQTVVGTYHGSPDQSHQ<br>VTGNHQQPPQQNTGFPR/SNQPYYN<br>SRGVSRGGSRGARGLMNGYRGPAN<br>GFRGGYDGYRPSFSNTPNSGYTQSQ<br>FSAPRDYSGYQRDGYQQNFIP  |
| 3956  | 9453                                    | A | 4239                                | 1                       |  | RLPPAFSSLSLRSEDALGHQPQRERS KSSGPPPPSGSSGSEAAAGAGAAAP ASQHPATGTGAVQTEAMKQILGVI DKKLRNLEKKKGKLDDYQERMNK GERLNQDQLDAVSKYQEVTNNLEF AKELQRSFMALSQDIQKTIKKTARR EQLMREEAEQKRLKTVLELQYVLD KLGDDEVRTDLKQGLNGVPILSEEE LSLLDEFYKLVDPERDMSLRLNEQY EHASIHLWDLLEGKEKPVCGTTYK VLKEIVERVFQSNYFDSTHNHQNGL   |

| NO: of malecto-dide sequence of the properties sequence of the properties sequence of the properties sequence of the properties sequence of the properties sequence of the properties of the properties sequence of the properties o | SEQ ID      | SEQ ID   | Me            | SEQ ID NO: | Nucleotide  | Nucleotide       | Amino acid sequence ( X=Unknown; *=Stop           |
|--|-------------|----------|---------------|------------|-------------|------------------|---|
|  |             | NO: of   | tho           | in USSN    | location of | location of last | codon; /=possible nucleotide deletion: \=possible |
|  |             | 1 ~ ~    | ď             | 09/770,160 | 1           |                  | nucleotide insertion)                             |
| CEBEBADSAPAVEDQVPEABPTEPAE   EYTEQSEVESTEY-VNQFDMAETOPT   SGEKEQVDEWTYETVEVVNSLQQQ   PQAASPSVPEPHSLTPVAQADPLVR   RQRVQDLMAQMQGPDNFIQDSML   DFENQTILDPAIVSAQPMNPTQMMD   MPQLVCPVHISESTALAQPNQVPVQ   EATQVPLVSSTSEGYTASQPLYQPS   HATEQRPQKEPHDQQATISLINTQD   TASSSLPAASQPQVPQAGTSKPLHS   SGINVNAAPPQSMQTVPNMAMPY   PVNREPTLKQQNQSQASYNQSESS   VQSPS*QOTELQQVBQLQTTVGSTY   HGSQDQSHQJVTGNHQQVPQQQT   GIST*AIRPYNNSEQSTQSTQDLQTVGSTY   HGSQDQSHQJVTGNHQQVPQQQT   GIST*AIRPYNNSEQSSGGSRG   APIGGGGPPRPNRGMPQMNTQQV   K   ROMYSEDVPCDHRVHARIIGSRG   SPSLIKLPNSGYSHSPQFQCLPRDYL   WPQRDSGYTQMTRCRSGQSGPRG   APIGGGGPPRPNRGMPQMNTQQV   K   ROMYSEDVPCDHRVHARIIGSRG   KAIRKIMDEFKVDIRFPQSGAPPDN   CVTVTGLPENVEEADHILNLEEFYL   ADVVDSFALQVYMKPPAHEEAWP   CPURTCSTV   CPURTCSTV   PCCGFPGLCVGVRSTMSSVAVLTQ   ESRAHRSGLVPQQIKVATLNSEES   DPPTYKDAFPPLPEKAACLESAQEP   AGAWGMKIRPIKASVTTQVHFVPL   ERKYKDMNQFGGEQAKICLEIMQ   RTGAHLEISLAKDQGISIMVSGKL   DAVMKARKDIVARLQTQASATVAI   PKEHIRFVIGKNGEKQDLELKTAT   KIQIPRPDPSNQKITGTKEGIEKAR   HEVLLISAEQDKRAVERLEVEKEN   PFIAGPYNRLVGEIMQETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMQETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMQETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMGETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMGETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMGETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMGETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMGETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMGETGTRINIPPP   SVNRTETEVTGEREGOLAQAVARIKE   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAGPYNRLVGEIMGEGONINI   PFIAG   | o que un co | bequence | 1             | Ì          |             | ſ                |   |
| SETEGSEVESTEYVNROPMAETIGFT   |             |          |               |            |             | sequence         |   |
| SGEKEQVDEWTVETVEVVNSLQQQ   PQAASPSVPEPHSLTPVAQADPL\R   RQRVQDLMAQMQGPDNFIQDSML   DFENOTLDPALVSAQPMMPTOMD   MPOLVCPPVHSESRLAQPNQVPVQP   EATQVPLVSSTSEGYTASQPLYQPS   HATEQRPQKEPIDGIQATISLNTDQT    TASSSLPAASQPQVPQAGTSKPLHS    SGINVNAAPFQSMQTVFMMNAPVP    PVNEPETILKQ\QNQSQAISYNQSFSS    VQSPS*QQTELQ\QSQAISYNQSFSS    VQSPS*QQTELQ\SQEQ\QTVVGSTY    HGS\QDQSHQ\VTGNHQQ\PPQ\QNT    GIST*AIRPYYNSRGVSRGGSGAGA    GLMNGYRGPANGFRGGYDGLPAP    WPIQRDG\/YIQQNFKRGSQSGPRG    APRGRG\(GPPRPNRGMPQMNTQQV    WPIQRDG\/YIQQNFKRGSQSGPRG    APRGRG\(GPPRPNRGMPQMNTQQV    WPIQRDG\/YIQQNFKRGSQSGPRG    APRGRG\(GPPRPNRGMPQMNTQQV    WPIQRDG\/YIQQNFKRGSQSGPRG    APRGRG\(GPPRPNRGMPQMNTQQV    WPIQRDG\/YIQQNFKRGSQSGPRG    APRGRG\(GPPRPNRGMPQMNTQQV    WPIQRDG\/YIQQNFKRGSQSGPRG    APRGRG\(GPPRPNRGMPQMNTQQV    WPIQRDG\/YIQQNFKRGSQSGPRG    APRGRG\(GPPRPNRGMPQMNTQQV    CVTVTGLPENVEEAIDHILNILEESYL   ADVVDSBALQVYMKPPAHEEAWP    CVTVTGLPENVEEAIDHILNILEESYL   ADVVDSBALQVYMKPPAHEEAWP    CVTVTGLPENVEEAIDHILNILEESYL   ADVVDSBALQVYMKPPAHEEAWP    CVTVTGLPENVEEAIDHILNILEESYL   ADVVDSBALQVYMKPPAHEEAWP    GPKGNAVPMLPPPLPKAACLESAQEP    AGAWGNKIRPIKASVITQVFHVPLE    ERKYKDMNQFGGGQAKICLEIMQ    RTGAHLELSLAKQQLSIMVSGKL   DAVMKARKDIVARLQTQASATVAI     PKEHRFYIGKNGEKLQDLEKTAT     KIQQPRVDPDPSNQIKITGTKEGIEKAR     HEVLLISAGQDKAVAFILEVEKAPH    PFIAGPYNRLVGEIMGETGTRINIPPP    SVNRTEINFTGEKEQLAQAVARIKK     YEEKKKKTTIAVEVKKSQHKYVI     GPKGNSLQEILELTAT     KIQQMFKVHLEFTGGDKTILGGFT     EDVNVAQEQIEGMVKDLINRMDYV     EINIDHKFHRHILGKSGANINRIKDQ     YKVSVIPPDSEKSNILIRGDPQGV     QQAKRELLELSARMENETKDLIE     QRFHRTIIGQKGFRREIRDKFPEVII     QRFHRTIIGQKGFRREIRDKFPEVII     NFPPPAGKSDIVQLRGPKNEVEKCT     KYMQKMVADLVENSYSISVPIFKQP     HKNIGKGGANIKKIREESNTKIDLP     AENSNSETIIITGKRANCEAARSRILS     IQKDLANIAEVEVSPAKLHNSLIGT     GREINSIMEECGGVHIHEPYEGGSG     DTVVIRGPSSDVEKAKRQLLHLAEE     KYKTRIMECGGGVHIHEPYEGGSG     DTVVIRGPSSDVEKAKRQLLHLAEE     KYKTRIMECGGGVHIHEPYEGGSG     DTVVIRGPSSDVEKAKRQLLHLAEE     KYKTRIMECGGGGVHIHEPYEGGSG     DTVVIRGPSSDVEKAKRQLLHLAEE     CKRETTION OF TOTAL     CTTTO OF TOTAL     TA   |             |          |               | 1          |             | ļ                | CEEEEADSAPAVEDQVPEAEPEPAE                         |
| PQAASPSVPEHSLTPVAQADPLÄVE RQRVQDLMAQMQGPDNFQDSML DFENQTLDPAIVSAQPMPTQMMD MPOLVCPPYHSESRLAQPHQVPVQP EATQVPLVSSTSEGYTASQPLYQPS HATEQRPQREPIDQIQATISLINIDQT TASSSLPAASQPQVPQAGTSEQHIS SGINVNAAPFQSMQTVFMMNAPVP PVNEPETLKQVQNQSQAISYNQSFSS QPSPS*QQTELQQEQLQTVVGGTY HGSQQQSHQVTGNHQYRQFQSNT GIST*AIRPYNSRGVSRGGSRGAR GLMMGYRQPAANEFRGGSVGGLPAD SFLLKLPNSGY/SHSPQFQCLPRDVL WPIQRDGYIQQNFKRGSGQSRGG APRGRGGPPRPNRGMPQMNTQQV K  3957 9454 A 4240 1 151 3958 9455 A 4241 5 120  S958 9456 A 4242 1 315 EQMVSEDVPCID/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVECAIDHILNLEEEYL ADVVDSEALQVYMKPPAHEEAWP CPLRITCSTV  3960 9457 A 4243 107 4057 FFCCGFFGLCVGVRSTMSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLEPKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNOFGEGGAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTDGASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTREGGEKAR HEVLLISAEQDKKITGTREGGEKAR HEVLLISAEQDKKITGTREGGEKAR HEVLLISAEQDKKITGTREGGEKAR HEVLLISAEQDKKITGTREGGEKAR HEVLLISAEQDKKITGTREGGEKAR HEVLLISAEQDKKITGTREGGEKAR HEVLLISAEQDKKITGTREGGEKAR HEVLLISAEQCHAVARIKK IYEEKKKKTTIIAVEVKKSQHKYVI GPKGNSLQEILEERTGVSVEIPPSDSIS ETVILRGEPEKLQQALTEVYAKANS FTVSSVAAPSWLHRRIIGKKQQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVINVAQEQIGGMVKLDINRMDYV EINIDHKFHRHLIGKSGGANINKIKQ YKVSVIPPDSEKSNLIRIEGDPPQGV QQAKRELLELASRMENERIKOLIIE QRFHRTIIIGOKGRRIREIRNKFPEVII NFPDPAQKSDIVQLRGFKNEYEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT GKDLANIAEVEVSIPAKLHNSLIGT GKDLANIAEVEVSIPAKLHNSLIGT GKDLANIAEVEVSIPAKLHNSLIGT GKDLANIAEVEVSIPAKLHNSLIGT GKDLANIAEVEVSIPAKLHNSLIGT GKDLANIAEVEVSIPAKLHNSLIGT GKGLANIAEVEVSIPAKLHASLIGT GKGLANIAEVEVSIPAKLHNSLIGT GKGLANIAEVEVSIPAKLHNSLIGT GKGLANIAEVEVSIPAKLHNSLIGT GKGLANIAEVEVSIPAKLHNSLIGT GKGLANIAEVEVSIPAKLHNSLIGT GKGLANIAEVEVSIPAKLHASLEG GKVKSFTVDIRARAFEVHKHLIGKGG  | }           |          |               |            |             | İ                | EYTEQSEVESTEYVNKQFMAETQFT                         |
| RQRVQDLMAQMGGPDNFIQDSML DFENQTLDPAIVSAQPMMPTQMMD MPQLVCPPVHSESRLAQPNQVPVQP EATQVPLVSSTSEGYTASQPLYQPS HATEQRPQKEPIDQIQATISLNTDQT TASSSLPAASQPQVPQAGTSKPLHS SGINVNAAPFGSMQTVFNMNAPVP PVNEPETILKQ\QNQSQAISYNQSFSS \(\text{QPSPS}\q\text{QTELQ\QNQQ}\text{QPSQ}\q\text{QPSQ}\text{QPSQ}\text{QPSQ}\q\te |             |          |               | 1          | 1           | ł                | DOA A SPSYDEDIST TOXA OA DDI YD                   |
| DFENOTLDPAIVSAQPMIPTOMMD MPCLVCPPVHSESRIA.QPRQVPVQP EATOVPLVSSTSEGYTASQPLYQPS HATEQRPQKEPIDGIQTATISLINTDQT TASSSLPAASQPQVPQAGTSEXPLHS SGINVNAAPFQSMQTVFMMNAPVP PVNEPETILKQNQOSQAISYNGSFSS VQPSP*QQTELQQEQLQTVVGNTY HGSQQQSHQVYTGNHQQPPQQNT GIST*AIRPYYNSRGVSRGGSRGAR GLMNGYRGPANGFRGGYDGLPAP SFLLKLPNSGY/SHSPQPCCLPRDVL WPICRADGYIQQNFKRGSGQSGPRG APRGRG/IQPPRPNRGMPQMNTQQV K  3957 9454 A 4240 l 151 3958 9455 A 4241 5 120 3958 9455 A 4241 5 120 3959 PA56 A 4242 l 315 EQMVSEDVPC/D/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEEAIDHILNILEESYL ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV PFCCGFPGLCVGVRSTMSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVHVPLE ERKYKDMNQFGGGGAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPPPDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK VJEKKKKTTTIAVEVKKSQHLA KITQQMFKVHEFTEGEDKITLEGFT EDVNVAQEQIEGMYGDINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVAPPSDLESSNJIRIEGDPQOV QQAKRELLELASRMENERTKDLIE QRFHRTIIGQKGERIREIRRKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSSETIIITGKRANCEAARSRILS IQKDLAMIAEVEVSIPAKLHNSLIGIT KGRLIRSIMEECGGVHIHPPVEGGSS DTVVIKGPSSDVEKAKKQLHILAEE   | İ           |          |               |            |             |                  | POPVODI MA OMOGRANIELODOMI                        |
| MPQLVCPPVHSESRLAQPNQVPQ EATQVPLVSSTSGYTASQPLYQPS HATTQRPVSSTSGYTASQPLYQPS HATTQRPQKSTSGYTASQPLYQPS HATTQRPQKEPIDOIQATISLNTDQT TASSSLPAASQPQVPQAGTSKPLHS SGINVNAAPPQSMQTVFNMNAPVP PVNEPETILKQQNOSQAISYNQSSTS VQPSPS*QQTELQQVEQLQTVGGTY HGS\QDQSHQ\VTGHYQQPQ\QDYT GIST*AIRPYYNSRGVSRGSRGAR GLMNGYRGPANGFR\GGYDGLPAPV WPIQRDG/YIQQNFKRGSQQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K SHPQPQT\[ WPIQRDG/YIQQNFKRGSQQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K SHPQPG\[ WPIQRDG/YIQQNFKRGSQQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K SHPQPG\[ WPIQRDG/YIQQNFKRGSQQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K SHPQPT\[ WPIQRDG/YIQQNFKRGSQQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K SHPQPT\[ WPIQRDG/YIQQNFKRGSQQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K SHPQPT\[ WPIQRDG/YIQQNFKRGSQQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K SHPQPT\[ WPIQRDG/YIQQNFKRARI\[ WPIQRDG/YIQQNFKRARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQQNFKARI\[ WPIQRDG/YIQASATVAI\[  |             |          |               | ļ          | }           |                  | DEENOTI DPA IVS A ODMAIDTONIAD                    |
| ### ##################################   |             |          |               | j          | 1           |                  | MPOLVCPPVHSESRI AODNOVDVOD                        |
| HATEQRPOKEPIDOJCATISIATION TASSSLPAA SOPOVFOAGTSKPLHS SGINVNAAPFQSMQTVFNMNAPVP PVNEPBITLKQQNOSQAISYNQSES VOPSPS*QQTELQQVEQLQVFVGYTY HGS\QDQSHQ\VTGNHQQ\PPQ\QMT\ GIST*AIRPYNSRGVSRGSRGAR GLMNGYRGPANGFR\GGYDGLPAP SFLIKLPNSGYSISPOFQCLPRDYI, WPIQRDG\TQQNFKRGSGGSGRTG APRGRG\GPPRPNRGMPQMNTQQV K  3957 9454 A 4240 1 151  3958 9455 A 4241 5 120  3959 9456 A 4242 1 315 EQMVSEDVPC/D\HRVHARIIGSR\G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEZIDHILNLEEEYL ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV CPLRTCSTV PPCGGFFGLCVGVRSTMSSVAVLTQ ESFABHRSGLVPQQ\KVATLNSEESE DPPTYKDAFPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYDMN\OFGFGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVATIGVEKASH PECHHIPFVGGKAVGLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVATIGVEKASH PECHHIPFVGGKAVGLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVATIGVEKASH PECHHIPFVGGKAVGEREAR HEVLLISAEQDGKRAVERLEVKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEGLAQAAVARIKK IYEEKKKKTITIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSI ETVILGGPFEGLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLGE PEDVNVAQEQIEGMYKGLINRIMDVY EINIDHKFHRHLIGKSGANINRIKGU VEVSVIRIPPDSEKSNLIRIEGPQGV VQAKRELLELASRMENERTKDLIP AFNSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHINSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHILAEE  RENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHINSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHILAEE  RENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHINSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHILAEE  RENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHINSLIGT  |             |          | -             | ļ          | ļ           |                  |   |
| TASSSLPAASQPQVFQAGTSKPLHS SGINVNAAPPGSMOTVFNMAPVP PVNEPEYTLKQVQNQSQA\SYNQSFSS \( \)QPSPS*QQTELQQ\( \)QQA\SYNQSFSS \( \)QPSPS*QQTELQQ\( \)QQA\SYNQSFSS \( \)QPSPS*QQTELQQ\( \)QPQQNYTGNGQQ\( \)QPQQ\( \)QNGNGYRQQQ\( \)PQQA\THEPYYNSRGVSRGSRGAR GLMNGYRGPRANGFR\( \)GYGDPAP SFILLKLPNSGY/SHSPQFQCLPRDYL WPIQRDG/YIQQNFKRGSGQSGPRQ APRGRG\( \)GPPRPNRGMPQMNTQQV K  3957 9454 A 4240 1 151  3958 9455 A 4241 5 120  \$\$4241 5 120  \$\$4242 1 315 EQMVSEDVPC/D/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEEAIDHILNLEESY/A ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV PCCGFPGLCVGVYRSTMSSVAVLTQ ESFALEHRSGLVPQQIKVATLNSEES DPPTYKDAFPPLPEKAACLESAQEP AGAWONKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAAVARIKK IYEEKKKTTITAVEVKKSQHKYVI GFKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKQQNLA KITQQMPKVHIEFTEGEDKITLEGFT EDVDNVAQEQIEGMYKGLINRMDYV EINDHKFHRHLIGKSGANINRIKDQ YKYSVRIPPDSEKSNLTIEGPP OQAKRELLELASRMENERTKDLIE QRFHRTIIGQKGERIRERDKFPEVII NIFPDPAQKSDIVQLRGPKNEVECCT KYMQKMVADLVENSYSISVPIFKQC HKNIIGKGGANIKKIREESNIKIDLP AENSNSETIIITGKRANCEAARSRLIS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEG KYTKSFTVDIRAKPEYHKFLIGKGG   |             |          | }             |            | ]           | J                |   |
| SGINVNAAPFOSMOTVFNMNAPVP PVNEPETILKQNONGSQASYNOSFSS VQPSP*QQTELQQ\EQLQTVVG\TY HGS\QDQSHQ\VTGNHQQ\PPQ\ONT GIST*AIRPYNSRGVSRGGSRGAR GLMNGYRGP\AND\GFRGGYDGLPAP SFILKLP\SQY\SHSPOFQCLPRDYL WPIQRDG\T\QQNFKRGSQSGPRG APRGG\GPPP\NRGMPQ\MPTQQV WPIQRDG\T\QQNFKRGSQSGPRG APRGG\GPPP\NRGMP\QMTQQV APRG\GPP\GPP\RGMP\QMTQQV APRG\GPP\GPP\GPP\GPP\GPP\GPP\GPP\GPP\GPP\  |             | 1        |               |            |             |                  |   |
| PVNEPETILKQQNQSQAISYNQSFSS \( \) \( \text{OPSPS*QCPELQQUEQL} \) \( \text{VOPSPS*QCPELQQUEQL} \ |             |          |               |            |             | ĺ                |   |
| SPSPS*QQTELQQEQLQTVVGTY   HGSQDQDSHQVTGHYQQPPQIQNT   GIST*AIRPYYNSRGVSRGGSRGAR   GLMNGYRGPIANGFRIGGYDGLPAP   SFILKLPNSGVJSHSPGFQCLPRDVL   WPIQRDG/YIQQNFKRGSGQSGPRG   APRGRGGPPRPNRGMPQMNTQQV   K   WPIQRDG/YIQQNFKRGSGQSGPRG   APRGRGGPPRPNRGMPQMNTQQV   K   WPIQRDG/YIQQNFKRGSGQSGPRG   APRGRGGPPRPNRGMPQMNTQQV   WPIQRDG/YIQQNFKRGSGQSGPRG   APRGRGGPPRPNRGMPQMNTQQV   W   W   W   W   W   W   W   W   W  |             | 1        |               |            |             |                  | PVNEPE\TLKQ\QNQSQA\SYNQSFSS                       |
| HGSQDQSHQVTTGNHQQPPQQONT GIST*AIRPYNSRGVSGSGAGAR GLMNGYRGP\ANGFRIGGYDGLPAP SFLLKLPNSGY/SHSPQFQCLPRDYL WP\QRDGY\QQNFKRGSGQSGPRG APRGR\GPPPPNRGMPQMNTQQV K  3957 9454 A 4240 1 151 3958 9455 A 4241 5 120 3959 9456 A 4242 1 315 EQMVSEDVPC/D/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEEAIDHILNLEEEYL ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV  PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITOYHVPLE ERKYKDMNQFGGEGOAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRPVIGKNGEKLQDLELKTAT KIQIPPPDPDSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSUPPSDISI ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRIMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERIKDLIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVOLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNETIIITGKRANCEAARSRILS IQKDLANIAGVEVSIPSALINSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  |             |          | İ             | }          |             |                  | \QPSPS*QQTELQQ\EQLQTVVG\TY                        |
| GLMNGYRGPANGFRIGGYDGLPAP SFLLKLPNSGY/SHSPQFQCLPRDYL WPIQRDG/YIQQNFKRGSGQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K 3957 9454 A 4240 1 151 3958 9455 A 4241 5 120 3959 9456 A 4242 1 315 EQMVSEDVPC/D/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEEAIDHILNLEEEYL ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV CPLRTCSTV CPLRTCSTV SFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGGQAKICLEIMQ RTGAHLELSLAKDQGLSIMVYSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTITIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLQALATEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMEMERTKDLIIE QRFHRTIIGQKGERIREINKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITIGKRANCEAARSRILS IQKDLANIAEVEVSIPPAKLHNSLIGT KGRIRSIMEECGGVHHIPPVEGSGS DTVVIRGPSSDVEKAKKQLIHLAEE  |             |          |               | '          |             | }                | HGS\QDQSHQ\VTGNHQQ\PPQ\QNT                        |
| SFLLKLPNSGY/SHSPQFQCLPRDYL WPIQRDGY/IQQNFKRGSGQSGPRG APRGRG\GPPRPNRGMPQMNTQQV K  3957 9454 A 4240 1 151  3958 9455 A 4241 5 120  3959 9456 A 4242 1 315 EQMVSEDVPC/D/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEEAIDHILNLEEEYL ADVVDSEALQYYMKPPAHEEAWP CPLRTCSTV  960 9457 A 4243 107 4057 PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNOFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGFYNRLVGEIMGETGTRINIPPP SVNRTEIVFTGEKEQLAQAATIEKY VEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQAATEVYAKANS FTVSSVAAPSWLHRFIIGKKGONLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMYKDINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPOGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGFKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKDLHLAEE   |             | Ī        |               |            |             |                  | GIST*AIRPYYNSRGVSRGGSRGAR                         |
| WPIQRDG/YIQQNFKRGSGQSGPRG  |             | }        |               |            |             |                  | GLMNGYRGP\ANGFR\GGYDGLPAP                         |
| APRGRG\GPPRPNRGMPQMNTQQV   | 1           |          |               |            |             |                  | SFLLKLPNSGY/SHSPQFQCLPRDYL                        |
| 3957   9454   A   4240   1   151   | ļ           |          | ] ,           |            |             |                  | WPIQRDG/YIQQNFKRGSGQSGPRG                         |
| 3957   |             |          |               |            |             |                  |   |
| 3958 9455 A 4241 5 120 3959 9456 A 4242 1 315 EQMVSEDVPC/D/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEEAIDHILNLEEEYL ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV  3960 9457 A 4243 107 4057 PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGQAKICLEIMQ RTGAHLELSLAKDQGISIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTILAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGGRIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE   | 3957        | 9454     | Δ             | 4240       | <u> </u>    | 151              | K   |
| 3959 9456 A 4242 I 315 EQMVSEDVPC/D/HRVHARIIGSR/G KAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVERAIDHILNLEEEYL ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV  3960 9457 A 4243 I07 4057 PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENETKDLIIE QRFHRTIIGQKGERIEIRDKFPEVII NFPDPAQKSDU/LRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE   |             |          |               |            |             |                  |   |
| RAIRKIMDEFKVDIRFPQSGAPDPN CVTVTGLPENVEEAIDHILNLEEEYL ADVVDSEALQVYMKPPAHEEAWP CPLRTCSTV  3960 9457 A 4243 107 4057 PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGFKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFFVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE  |             |          | $\overline{}$ |            |             |                  | EOMVSEDVPC/D/HRVHARIIGSR/G                        |
| 3960 9457 A 4243 107 4057 PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTITAVEVKRSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVERSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFFVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  | KAIRKIMDEFKVDIRFPOSGAPDPN                         |
| 3960 9457 A 4243 107 4057 PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLEISLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGGRIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE  | i           |          |               |            |             |                  | CVTVTGLPENVEEAIDHILNLEEEYL                        |
| 9457 A 4243 107 4057 PFCCGFPGLCVGVRSTMSSVAVLTQ ESFAEHRSGLVPQQIKVATLNSEEES DPPTYKDAFPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLQQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  | [           |          |               |            |             |                  |   |
| ESFAEHRSGLVPQQIKVATLNSEES DPPTYKDAFPPLPEKAACLESAQEP AGA WGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPPPDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIRIERDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE   | 2060        | 0457     | $\perp$       | 40.40      | 105         | 10.55            |   |
| DPPTYKDAPPLPEKAACLESAQEP AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMYKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  | 3960        | 945/     | A             | 4243       | 107         | 4057             |   |
| AGAWGNKIRPIKASVITQVFHVPLE ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTIIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  |             |          |               |            |             |                  | DDDTVVDAEDDI DEVAACI ESACED                       |
| ERKYKDMNQFGEGEQAKICLEIMQ RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   | [           |          |               |            | (           |                  |   |
| RTGAHLELSLAKDQGLSIMVSGKL DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          | 1 1           | l          | 1           |                  |   |
| DAVMKARKDIVARLQTQASATVAI PKEHHRFVIGKNGEKLQDLELKTAT KIQIPPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFFDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE  |             |          | 1 1           |            |             |                  |   |
| PKEHHRFVIGKNGEKLQDLELKTAT KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  |             |          |               |            |             |                  |   |
| KIQIPRPDDPSNQIKITGTKEGIEKAR HEVLLISAEQDKRAVERLEVEKAFH PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  |             |          | 1 1           |            |             | !                |   |
| PFIAGPYNRLVGEIMQETGTRINIPPP SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  |   |
| SVNRTEIVFTGEKEQLAQAVARIKK IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  | HEVLLISAEQDKRAVERLEVEKAFH                         |
| IYEEKKKKTTTIAVEVKKSQHKYVI GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  |   |
| GPKGNSLQEILERTGVSVEIPPSDSIS ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            | ]           |                  |   |
| ETVILRGEPEKLGQALTEVYAKANS FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          | ] ]           |            |             |                  |   |
| FTVSSVAAPSWLHRFIIGKKGQNLA KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  |   |
| KITQQMPKVHIEFTEGEDKITLEGPT EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            | [           |                  |   |
| EDVNVAQEQIEGMVKDLINRMDYV EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  |             |          |               | l          |             | İ                |   |
| EINIDHKFHRHLIGKSGANINRIKDQ YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  |   |
| YKVSVRIPPDSEKSNLIRIEGDPQGV QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  |             |          |               | İ          |             |                  |   |
| QQAKRELLELASRMENERTKDLIIE QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               | ŀ          |             |                  |   |
| QRFHRTIIGQKGERIREIRDKFPEVII NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          | 1 1           |            | }           | 1                |   |
| NFPDPAQKSDIVQLRGPKNEVEKCT KYMQKMVADLVENSYSISVPIFKQF HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  |   |
| HKNIIGKGGANIKKIREESNTKIDLP AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             | ļ                |   |
| AENSNSETIIITGKRANCEAARSRILS IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  | }           |          | 1 1           |            |             | }                |   |
| IQKDLANIAEVEVSIPAKLHNSLIGT KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  | ļ           |          |               |            |             |                  |   |
| KGRLIRSIMEECGGVHIHFPVEGSGS DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG   |             |          |               |            |             |                  |   |
| DTVVIRGPSSDVEKAKKQLLHLAEE KQTKSFTVDIRAKPEYHKFLIGKGG  | ,           |          |               |            |             |                  |   |
| KQTKSFTVDIRAKPEYHKFLIGKGG  |             |          |               |            | ſ           | ſ                |   |
|  | j           |          |               | J          |             | }                |   |
|  | ļ           |          |               |            |             |                  | GKIRKVRDSTGARVIFPAAEDKDQD                         |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|-------------------------|--|--|
|   |   |     |                                     |                         |  | LITIIGKEDAVREAQKELEALIQNLD NVVEDSMLVDPKHHRHFVIRRGQV LREIAEEYGGVMVSFPRSGTQSDKV TLKGAKDCVEAAKKRIQEIIEDLEA QVTLECAIPQKFHRSVMGPKGSRIQ QITRDFSVQIKFPDREENAVHSTEPV VQENGDEAGEGREAKDCDPGSPRR CDIIIISGRKEKCEAAKEALEALVPV TIEVEVPFDLHRYVIGQKGSGIRKM MDEFEVNIHVPAPELQSDIIAITGLA ANLDRAKAGLLERVKELQAEQEDR ALRSFKLSV\TVDPKLHSPGLSGRK GASNSQI/RGLKHDVNIQFP\DKD\D ANQHQD\QITFTGYEKNHSSLPGDAI LRIVG\ELE\QMVSE\DVP\LNHRVSR PASFGARGKSHPPKIMYEF\KV\DIRF PNKSGAPKTPNCVNC*RGFP\ENVE ESHSTQHPSILEEE\YL\ADVV\DSEA LQ\VYMEPP/AHTEEAKGNFSRG\FD VRDAPL\TA\SSSEKAS\DMSSSEEF\P SFWG*RWLPKTLP\WGPKTIMIKKE QNPLPAC |
| 3961  | 9458                                    | A   | 4244                                | 11                      | 323  |  |
| 3962  | 9459                                    | A   | 4245                                | 3                       | 171  |  |
| 3963  | 9460                                    | В   | 4246                                | 148                     | 405  | XKLSVERKDPLAALAREYGGSKRN<br>ALLKWCQKKTQGYAKRNLLLAFE<br>AAESVGIKPSLELSEMLYTDRPDWQ<br>SVMQYVAQIYKYFET*   |
| 3964  | 9461                                    | A   | 4247                                | 2                       | 438  | AVGGNGGCPRPSRVTSQSTCRFGPR TASHSASRAGLCTASR*VPGWV*CL HFQPLQMPTRDSSFSPDYSAPGRGC GQAGRCGAEHRRPGHRSSCC*NW* CQCSHNLVSSSGTISVEHCAWNHRI PGPRLPEGLFFPH*VCFVVSM   |
| 3965  | 9462                                    | A   | 4248                                | 3                       | 256  |  |
| 3966  | 9463                                    | A   | 4249                                | 3                       | 444  |  |
| 3967  | 9464                                    | Α   | 4250                                | 3                       | 828  | VKGVPGVKAERF\E*RMTAKHCALS LVGEPIMYPEINRFLKLLHQCKISSF LVTNAQFPAEIRNLEPVTQLYVRVD ASTKDSLKKIDRPLFKDFWQRFLDS VKALAVKQQRTVYRLTLVKAW\NV \ESLQAYAQLGSLGNPDFIEVKGVT YCRESSASSLTMAHVPWHEEVVQF VRELVDLIPEYEIACEHEHSNCLLIA HRKFKIGGEWWTWIDYNRFQELIQ EYEDSGGSKTFSAKDYMARTPHWA LFGASERGFDPKDTRHQRKNKSKAI SGC  |
| 3968  | 9465                                    | A   | 4251                                | 1                       | 384  |  |
| 3969  | 9466                                    | À   | 4252                                | 3                       | 1225   |  |
| 3970  | 9467                                    | A   | 4253                                | 1                       | 864  |  |
| 3971  | 9468                                    | Α   | 4254                                | 1                       | 1266   | GNSPPSELKWKAKSEDLRHRGLKA QAEIKGSTQQIGFTTDPRMARSSPYP TDVARVVNAPIFHVNSDDPEAVMY VCKVAAEWRSTFHKDVVVDLVCY RRNGHNEMDEPMFTQPLMYKQIRK QKPVLQKYAELLVSQGVVNQPEYE   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |       | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon | Nuclcotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-------|-------------------------------------|----------------------------|--|---|
|   |   |       | ·                                   |                            |  | CVSMHGVRNKPSYNSTKSSMDGLI LHPATGLVFVLSKQCEEIHQPVVWT CEQREAENATAEENRVLLAMVNPT VFFDIAVDG\EPLGRVSFEVGRAAA CGNGAQKVGRGRENFRCSEPLERK GFGL*GVPCFHRLFPRVLCVQGGEL QQRH\NGNWWASPILWGRKFERLK NFHP*KPYGSPGILSPWQNAGPQTQ MVPQFF\ICTAQDCSGWNGQAMWV FGTSERKAMNIVEAHWSRFG\SR\N GKTQQRRSPFADCGQLLISLTCVFIF NHPDHSLL  |
| 3972  | 9469                                    | A     | 4255                                | 3                          | 275  |   |
| 3973  | 9470                                    | A     | 4256                                | 125                        | 315  |   |
| 3974<br>3975                                | 9471<br>9472                            | A     | 4257<br>4259                        | 3                          | 3045   | MDKFLNTYTLPRLKQEEVESLNRPI   |
|   |   |       |                                     |                            |  | TGSDIEAIINSLPTKKKSRTRWIHSRI LPEVQGGAEKEGILPNSFYEASIILIP KPASDTTKKENFRPISLMNINAKILN KILAKQIRQHIKKLIHHDQVGFIPGM HGLFNICKSVNIIQHINRTNDKNHMI ISIDAEKPFDKIQQHFMLKTLNKLA QNLLKLIGNFSKVSGYKINVQKSQA FLYTNNRQTESQIMNEFPFTIASKRI KYLGIQLTRDVKDLFKENYKALLN EIKEDTNKWKNIPCS\WEKTTLKFI W/NQKRAHIAKSIISQKNKAGGITLP DFKLYCKATVTKTAWYWYQNRDI DQWNRTESSEIMPHIYNHLIFDKPD KKKKWGKDSLFNKWCWENWLAIC RKLKLDPFLTPDTKINSRRIKDLNVR PEMIKTLEENLGNTIQDIGMGKDFM SKTPKAMATKAKIDKWDLIKLKSF CTAKETTIRVNRQPTEWEKIFAIYSS DKGLISRIYNELKQIYKKKTNNPIEK WAKDMNRHFSKEDIYAAKKHMKK CSSSLVIREIQIKTTMRYHLTPVRMA IIKKSGNNRCWRGCGEIGTLLHCW WDCKLVQPLWKSVWRFLRDLELEI PFDPAIPLLAAPSLPSGLRSPSKSSPS PPSRCTLVIILLHVFWDIVFFDGCEK KRWYILLIVLLTRLLVSACTFTEGY TVGFSTFEALRLGLSRYWLPCSSAC RRPIVGLQLVMINSGNFQVIAMEGT VASECCHGNGKLTWHRPVLSVCSF SRCTVQAAGGSAILEDGDPLLTAPL GSTPQAAVCRGPRGRELRAAPADS HLFQRDLWPFNKVIVHGEKGSNQT SQGLLNTGSEMTIVLENPKYHSGPP VRVSPDGGQVIIEVLADPSYTGPTA LNNVFFAFQCNFYFDHIPENCGFSD PSDPQNLQKGEGCPSLVRASTAPPQ EKATEQPLLCKTTESPFGMTVGPCT DETLDHGAPSKHVPGTAHNELALL DLRVIKSAGSAAVHHKLKVLHWRS SLSNNKGTGRLYEQVA |
| 3976  | 9473                                    | A     | 4260                                |                            | 2526   | SLSININKG I UKL Y EQVA  |
| 4U / h                                      |   | _ A.I | <del>-1</del> ∠UU                   | 1                          | 2320 I   |   |

## MISSING AT THE TIME OF PUBLICATION

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | VDTIAADESFSQVDFGGRLMKDYG ACMSLLSVRVFFKKCPSIVQNFAVF PETMTGAESTSLVIARGTCIPNAEEV DVPIKLYCNGDGEWMVPIGRCTCK PGYEPENSVACKGPVNNTEKAKSG EMWFSPEEYGWEYAAFLALRKCSQ CPEDAVAASGAVALENLMEHGHIR LDKASKDSESSTPHDPTLLFHSGPQP NFRHFQGWNTVTSEGSLIHLPKSKT QSQCPGLFGGSLDSRIDIGGAWYFC HTHTASSASTPSEEAGSLADPSNETE SLLFACTALCSPWECQLILDLASLFQ GIMLMPRAVQFFKCWDKVTVRNQ WRMHSHGPSCLGVSFQKGLCQEM VYISTRGSSSGLRPLVLSLHGWAVD TAIHTCIPFPTDIIWIQDLIAGLKDEW FDTHPGRRIGRPAQLCSSRSGVH  |
| 3980  | 9477                                    | A | 4264                                |   | 2653   | MGDFNTPLSTLDRSMRQKVNKDIQ ELNSALHQADLIDIYRNLHPESTEYT FFSAPHHTYSKIDHILGSKAPLSKYR RSEIKINCLSDHSAIKLELRIKKLTQ NRSTTWKLNNLLLNDYWVHNEMK AEIKMFFETNENKDTTYQNLWDTL KAVCRGKFIALNAHKRKQERSKIDT LTSQLKELEKQEQTHSKASRRQEIS KIRGELKEIETQKTLQKINESRGWFF EKINKIDRLLARLIKKKREKNQIHAI KNDKGDMSTNHTEIQTTIREYYKHL YANKLENLKEIDKFLETYSLPRLNQ EEVESLNRPITGSEIEAIINSLPNKRS PGPDGFTAKFYQRYKEELLISNFSK VSGYKINVQKSQAFLYTNNRQTES QIMSELPFTIASKRMKYLGIQPTRD MKDLFKENYKPLLNEIKEDTNKWK NIPCSWVGRINIVKMAILPKNWKKT TLKFIWNQKRARIAKSILSQKNKAG GIMLPDFKLYYKATITKTAWYWYQ NRDIDQWNRTEPSEIMPHIYNHLIFD KPDKNKKWGKDSLFNKWCWENW LAICRKLKLDPFLTPYTKINSRWIKD LNVRPKTIKTLEENPGNTIQDIGMG EDFMSKTPEAMATKAKIDKWDLIK LKSFCTAKETTIRLNRPPTEWEKIFA IYSSDKGLISRIYNELQQIYEKKTNN PIKKWAKDMNRHLSKEDIYAAKRH MKKCASSLAIREIQIKTTMRYHLTP VRMAIIKKSGNNRCWRGCGEIGTLL HCWWDCKLVQPLWKSVWRFLRDL ELEIPFDPAIPLLGIYPKDYKSCCYE DTCTHMFIVALFTIAKTWNQPKCPT MIDWIKKMWHIYTMEYYADIKKDE FMSFVRTRMKLETIILSKISQ\EKKT KHRMFSLIGGN |
| 3981  | 9478                                    | A | 4265                                | 1   | 2988   | MINIMUSEIGOIN   |
| 3982  | 9479                                    | A | 4266                                | 1   | 2515   | MGDFNTPLSTLDRSTRQKVNKDTQ<br>ELNSAPHQADLIDIYRTLHPKSTEYT<br>FFSAPHHTYSKTDHILGSKALLSEC<br>KRTEIITNYLSDDSAIKLELRIKNLT   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | QNRSTTWKLNNLLLDDYWVHNEM KAEIKMFFETNENKDTTYQNLWDA FKAVCRGKFVALNAHKRKQGRSKI DTLTSQLKELEKQEQTHSKASRRQE ITKIRAELKEIETQKTVQKINESRSW FFERINKIDRQLARLIKKKREKNLID AIKNDKGDITTDPTEIQTTIREYYKH LYANKLENLEEMDKFLDTYTLPRL NQEEVESLNRPITGSEIVAIINSLTTK KSPGPDGFTAEFYQRAIRQEKEIKGI QLGKEEVKLSLFADDMIVYLENPIV SAQKLISNFSKVSGYKINVQKSQAF LYTNNRQTESQIMSELPFTIASKRIK YLGIQLTRDVKDLFKENYKPLLKEI KEDTNKWKNIPCSWVGRINIVKMAI LPKVIYRFNAIPIKLPMTFFTELKKT TLNFIWNQK\RAHIAKS/VLSQKNKA GGITLPDFKLYYKATVTKTAWYWY QNRDTDQWNRTEPSEIMPRIYNYLI FDKPEKNKQWGKDSLFNKWCWKN WLAICRKLKLDPFLTPYTKINSRWI KDLNIRPKTIKTLEENLGITIQDIGM GKDFMSKTPKAMATKAKIDKWDLI KLKSFCTAKETTNRVNRQPTKWEKI FATYSSDKGLISRIYNELKQIYKKKT NNPIKKWAKDMNRHFSKEDIYAAK KHMKKCSSSLAIREMQIKTTMRYH LTLVRMAIIKKSGNNRCWRGRGEIG TLLHCWWDCKLVQSLWKSVWQFL |
| 3983  | 9480                                    | В | 4267                                |                         | 2634   | RDLELEIPFDPAIPLL  MGDFNTPLSTLDRSMRQKVNKDTQ ELNSALHQGDLIDIYRTLHPKSTEYI FFSAPHHTYSKIDHILGSKALLSKCK RTEIITNDLSDHSAIKLELRIKNLTQ NCATTQKLNNLLLNDYWVHNEMK AEIKMFFETNENKDTTYQNLWDAF KAVCRGKFIALHAHKRKQERSKIDT LTSQLKELEKQEQTHSKASRRQEIT KIRAELKEIETQKTLQKINESRSWFF ERINKIDRLLARLIKKKREKNQIDAI KNDKGDITTDPTEIRTTVREYYKHL YANKLENLEEMDTFLDTYTLPRLN QEEVESLNRPITGAEIVAIINSLPTKK SPGPDGFTAEFYQRFRKGLRQNSTT FMPKTLNKLGIDGTYLKIIRAIYDKP TANIILNGQKLEAFPLKTGTRQGWP LSPLLFNIVLEVLARAIRQEKEIKGIQ LGKEEVKLSLFADDMIVYLENPIVS AQNLLKLISNFSKVSGYKINVQKSQ AFLYTNNRQTESQIMSELPFTIASKR IKYLGIQLTRDVKDLFKENYKPLLK KIKEDTNKWKNIPCSWVGRINIVKM AILPKVIYRFHAIPIKLPMTFFTELEK TTLKFIWNQKRACIAKSILNQKNKA GGITLPDFKLYYKAIVTKTAWYWY QNRDIDQWIRTEPSEITLHIYKYLIF DKPEKNKQWGKDSLFNKWYWEN WLAICRKLKLDPFLTPYTKINSRWI  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |    | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----|-------------------------------------|-------------------------|--|---|
|   |   |    |                                     |                         |  | KDLNIRPKTIKTLEENLGFTIQDIGM<br>GKNFMSKTPKAMATEAKIDKWDLI<br>KLKSFCTAKETTIRVNRQPTKWEKI<br>FATYSSDKGLISRIYNELKQIYKKKT<br>NNPLKKWAKDMNRHFSKEDIYAA<br>KKHMKKCSPSLAIREMQIKTTMRY<br>HLTPVRMTIIKSQETTGAGEDVEK*   |
| 3984  | 9481                                    | A  | 4268                                | 1                       | 2429   |   |
| 3985  | 9482                                    | A  | 4269                                | 1                       | 2745   |   |
| 3986  | 9483                                    | A  | 4270                                |                         | 3210   | MVKGSIQQEELTILNIYAPNTGALRF IKQVLRDLQRDLDSHTIIMGDFHTP LSTLDRSTRQKVNKDIQELNSALHQ EDLIDIYRTLHPKSTEYTFFSAPHHT YSKIDHIVGSKALLSKCKRTEIITNC LSDHSAIKLELRIKNLTQNRSTTWK LNNLLLNDYWVHNEMKAEIKMFFE TNENKDTTYQNLWDTFKAVCRGKF IALNAHKRKQERSKIDTLTSQLKEL EKQEQTHSKASRRQEITKIRAELKEI ETQKTLQNINESRSWFFERINKIDRP LARLIKKKREKNQIDAIKNDKGDIT TDPTEIQTTIREYYKHLYANKLENL EEMDKFLNTYTLPTLNQEEVESLNR PITGAEIVAIINSLPTKKSPGPDGFTA EFYQRYKEELVPFLLKPFQSIEKEGI LPNSFYEASIILIPKPGRDTTKKENFR PISLMNIDAKILNKILAKRIQQHIKN LIHHDQVGFIPGMQGWFNIRKSINVI QHINRAKDKNHMIISIDAEKAFDKI QQPFMLKTLNKLDDMIVYLENPIVS AQNLLKLISNFSKVSGYKINIQKSQA FLYTNNRQTESQIMSELPFTIASKRI KYLGIQLTRDVKDLFK\ENHKPLLN EIKEDTNKWKNIPCSWVGRINIVKM AILPKVIYR/FNAIPIKLPMTFFTELE KTTLKFIWNQKRARIAKSILSQKNK AGGITLPDFKLYYKATVTKTAWYW YQNRDIDQWNRTEPSERTPHIYNYL IFDKREKNKQWGKDSLFNKWCWE NWLAICRKLKLDPFLTPYTKINSRW IKDLNVRPKTIKTLEENLGFTIQDIG MGKDFISKTPKAMATKAKIDKWDL IKLKSFCTAKETTIRVNRQPTKWEKI FATYSSDKGLISRIYNELKQIYKKKT NNPIKKWAKDMNRHFSKEDIYAAK KHMKKCSPSLAIREMQIKTTMRYH LTPVRMAIIKKSGNNRCWRGCGEIG TLLHCWWDCKLVQPLWKAVWRFL RDLELEIPFDPAIPLLGIYPKDYKSC |
| 1   |   |    |                                     |                         |  | DGEWSLTKWTRPGSRALPWPPEQA<br>KPYPPTLPTLAQDF  |
| 3987  | 9484                                    | A  | 4271                                | 3                       | 3655   | Krirrilayur   |
| 3988  | 9485                                    | (_ | 4272                                |                         | 3615   |   |
|   | 9486                                    |    | 4273                                |                         | 4038   |   |
|   | 9487                                    |    | 4274                                |                         | 3317   | MGDFNTPLSTLDRSTRQKVNKDTQ<br>ELNSALHQADLIDIYRTLQPKSTEYT<br>FFSAPHHTYSKIDHIVGSKALLSKCK  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |     | SEQ ID NO:<br>in USSN<br>09/770,160 |          | location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|---|---|-----|-------------------------------------|----------|---|---|
| Į   |   |     |                                     | sequence | peptide<br>sequence                                 |   |
|   |   |     |                                     |          | sequence  | RTEIITNYLSDHSAIKLELRIKNLTQS<br>RSTTWKLNNLLLNDYWVHNEMKA  |
|   | {                                       |     |                                     |          | 1   | EIKMFFETNENKDTTYQNLWDAFK  |
| 1   |   |     | ļ                                   | }        |   | AVCRGKFIALNAHKRKQERSKIDTL   |
| ]   |   |     |                                     |          |   | TSQLKELEKQEQTHSKASRRQEITKI  |
|   | ĺ                                       | 1   | ĺ                                   |          |   | RAELKEIETQKTLQKINESRSWFFER  |
|   |   |     | 1                                   |          |   | INKIDRPLARLIKKKREKNQIDTIKN  |
| I   |   |     |                                     |          |   | DKGDITTDPTEIQTTIREYYKHLYA   |
|   |   |     |                                     |          |   | NKLENLDEMDKFLHTYTLPRLNQE  |
| ]   | ļ                                       |     |                                     |          |   | EVESLNGPITGAEIVAIIDSLPTKKSP   |
|   |   |     |                                     |          | 1   | GPDGFTAEFYQRYKEELVPFLLKLF<br>QSIEKEGILPNSFYEASIILIPKLGRDT   |
| 1   | }                                       | 1   |                                     |          |   | TKKENFRPLSLMNIDAKILNKILAK   |
|   |   |     |                                     | ļ        |   | RIQQHIKKLIHHDQVGFIPGMQGWF   |
|   |   |     |                                     |          |   | NIRKSINVIQHINRGKDKNHMIISID  |
| -   | (                                       | 1   |                                     | !        |   | AEKAFDKIQQPFMLKTLNKLGIDGT   |
|   |   |     |                                     | ļ        |   | YFKIIRAIYDKPTANIILNGQKLEAFP   |
|   | !                                       |     |                                     |          |   | LKTGTRQGCPLSPLLFNIVLEVLAR   |
|   |   |     |                                     | (        |   | AIRQEKEIKAQNLLKLISNFRKVSVY  |
|   |   |     |                                     | j        | •   | KINVQKSQAFLYTNNRQTESQIMRE   |
|   |   |     |                                     |          |   | LPFTIASKRIKYLGIQLTRDVKDLFK<br>ENYKPLLNEIKEDTNKWKNIPCSWI   |
|   | j                                       | 1   |                                     |          |   | GRINIVKMAILPKVIYRFNAIPIKLPT   |
|   | İ                                       |     |                                     |          | :   | TFFTELEKTILKFIWNQKRAHIAKTI  |
|   |   |     |                                     |          |   | LSQKNKAGGIMLPDFKLYYKATVT  |
| ł   |   |     |                                     |          |   | KTAWYWYQKRDIDQWNRIELSEIIP   |
|   |   |     |                                     |          |   | HIYNHLIFDKPDKNKKWGKDSVFN  |
|   |   |     |                                     |          |   | KRCWENWLAICRKLKLDTFLTPYT  |
|   |   |     |                                     |          |   | KINSRWIKDLHVRPKAIKTLEENLGI  |
|   |   |     |                                     |          |   | TIQDIGMGKDFTSKTPKAMATKAKI   |
| !   |   |     |                                     |          |   | DKWDLIKLKSFCTAKETTIRVNRQP<br>TKWEKIFAIYSSDKGLISRIYKELKQ   |
|   |   |     |                                     |          |   | IYKKKTNNPIKKWAKDMNRHFSKE  |
| ·   |   |     |                                     |          |   | DIYAANRHMKKCSSSLAIREMQIKT   |
|   |   |     |                                     |          |   | TMRYHLTPVRKAIIKKSGNNRCWR  |
|   |   |     |                                     |          |   | GCGEIGTLLHCWWDCKLVQP\LWK  |
|   |   |     |                                     |          |   | TVWQFLRDLELEIPFYPAIPLLGIYP  |
|   |   |     |                                     |          |   | KDYKSCCYKDTCTRMFIAALFTIAK   |
|   |   |     |                                     |          |   | TWNQPKCPTMIDWIKKMWHIYTM   |
|   |   |     |                                     |          |   | EYYAAIKNDEFMSFVGTWMKLEIII<br>LSKLSQEQKTKHGIFSLIGGN  |
| 3991  | 9488                                    | A   | 4275                                | 959      | 2955  | LSKLSQLQKTKIIGII SLIGGN   |
| 3992  | 9489                                    | A   | 4276                                | 1        | 2870  | MKAEIKMFFDTSENKDTTYWNLW   |
|   |   |     |                                     |          |   | DAFKAVCRGKFIALNAHKRKQERS  |
|   |   |     |                                     | 1        |   | KIDTLTSQLKELEKQEQTHSKASRR   |
|   |   |     |                                     |          | 1   | QEITKIRAELKEIETQKTLQKINESRS   |
|   |   |     |                                     |          |   | WFFERINKIDRPLARLIKKKREKNQI  |
|   |   | [ { |                                     | 1        | Í   | DAIKNDKGDITTDPTEIQTTIREYYK  |
|   |   |     |                                     |          |   | HLYANKLENLEEMDKFLDTYTLPR  |
|   |   |     |                                     |          | ļ   | LNQEEVESLNRPITGSEIVAIINSLPT<br>KKSPGPDGFTAEFYQSWAETQPKK   |
| [   |   |     | 1                                   |          | ĺ   | ENFRPISLMNIDAKILNKILAKRIQQ  |
| į   |   |     | 1                                   |          |   | HIKKLIHHDQVGFIPGMQGWFNIRK   |
|   |   |     |                                     |          | ļ   | SINVTQHINRAKDKNHMIISIDAEKA  |
| -   |   |     |                                     | l        | ſ   | FDKIQQPFMLKTLNKLGIDGTYFKII  |
| ]   |   |     |                                     | 1        | }   | RAIYDNPTANIILNGQKLEAFPLKTG  |
|   |   |     |                                     | 1        | ļ   | TRQGCPLSPLLFNIVLEVLARAIRQE  |
|   |   |     |                                     |          |   | KEIKGIQLGKEEVKLSLFADNMIVY   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------|---|---|
|   |   |   |                                     |             |   | LENPIVSAQNLLKLISNFSKVSGYKI NVQKSQAFLYTNNRQTESQIMSQLP FTIASKRIKYLGIQLTRDVKDLFKEN YKPLLKEIKEDTNKWKNIPCSG\EG RINIVKMAILPKNWKKTTLKFIWNQ KRARIAKSILSQKNKAGGITLPDFKL YYKATATKTAWYWYQNRDLDQW NRTEPSEITPHIYNYLIFDKPDKNKQ WGKDSLFNKWCWENWLAICRKLK LDPFLTPYTKINSRWIKDLNIRPKTI KTLEENLGITIQDIGMGKDFMSKTP KAMATKAKIDKWDLIKQESFCTAK ETTIRVNRQPTKWEKIFATYSSDKG LISRIYSELKQIYKKKTNNPIKKWAK DMNRHFSKEDIYAAKKHMKKCPSS LAIREMQIKTTMRYHLTPVRMAIIK KSGNNRCWRGCGEIGTLLHCWWD CKLVQPLWKSVWRFLRDLELEIPFD PAIPLLGIHPKDYKSCCYNDTCTRM FIAALFTIAKTWNQPKCPTIIDWIKK MWHIYTMEYYAAIKNDEFVSFVGT WMKLEIIILSKLSQEQKTTHRIFSLIG GN   |
| 3993  | 9490                                    | A | 4277                                | 1           | 2982  | OIV   |
| 3994  | 9490                                    | A | 4277                                | 1614        | 4577  | TEPKTKTT*LSQ*MQKKPLTKFSNPS C*KLSIN/IVLEVLARAIRQEKEIKGI QLGKEEVKLSLFADDMIVYLENPIV SAQNLLKLISNFSKVSGYKINVQKS QAFLYTNNRQTESQIMSELPFTTAS KRIKYLGIQLTRDVKDLFKENYKQL LKEIKEDTSKWKNIPCSWVGRINIV KMAILPKVIYRFNAIPIKLPMPFFTE LEKTTLKFIWNQKRACIAKSILSQK NKAGGITLPDFKLYYKATVTKTAW YWYQNRDIDQWNRTEPSEITPHIYN YLIFDKPEKNKQWGKDSLFNKWC WENWLAICRKLKLDPFLTPYTKINS RWIKDLNVRPKTIKTLEENLGIIIQDI GMGKDFMSKTPKAMATKAKIDKW DLIKLKSFCTAKETTIRVNRQPRKW EKIFATYSSDKGLISRIYNELKQIYK KKTNNPIKKWAKDMNRHFSKEDIY AAKKHMKKCSPSLAIREMQIKTTM RYHLTPVRMAIIKKSGNNRCWRGC GEIGTLLHCWWDCKLVQPLWNSV WRFLRDLELEIPFDPAIPLLGIYPND YKSCCYKDTCTRMTITSVEEKSQSE KLSYIFLKEKICLMYVGLLNILVSLS GKVPFWLYLGSRLATPPTSSQLFFIG GKERSPDEQGVDILIVLIFRYPSTDS AEQIKKKIEKALYQSLKTKQLSLTIN KPSFRLTRCGIRMTSSNMPLPASSST QRIVQGRETAMEGEWPWQASLQLI GSGHQCGASLISNTWLLTAAHCFW KNKDPTQWIATFGATITPPAVKRNV RKIILHENYHRETNENDIALVQLSTG VEFSNIVQRVCLPDSSIKLPPKTSVF VTGFGSIVDDGPIQNTLRQARVETIS |

## MISSING AT THE TIME OF PUBLICATION

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         |  | LPCLMIPSQMLLENFSAAIPGHRCW THMLDNGSAVSTNMTPKALLTISIP PGPNQGPHQCRRFRQPQWQLLDPN ATATSWSEADTEPCVDGWVYDRSV FTSTIVAKWDLVCSSQGLKPLSQSIF MSGILVGSFIWGLLSYRFGRKPMLS WCCLQLAVAGTSTIFAPTFVIYCGL RFVAAFGMAGIFLSSLTLMVEWTTT SRRAVTMTVVGCAFSAGQAALGGL AFALRDWRTLQLAASVPFFAISLIS WWLPESARWLIIKGKPDQALQELR KVARINGHKEAKNLTIETPPPPPPIPI PSPTAPPLSTPTITFTAITPSPPAPPIPS LTPQPPSLQNISTTFTTIVTIGNSTIIN STHTVTSITHHLHLHVARTHLMGVL DVSGETECVYLKVLMSSVKEEVAS AKEPRSVLDLFCVPVLRWRSCAML VVKYAVLGRDLTSSLARSFSLLISY YGLVFDLQSLGRDIFLLQALFGAVD FLGRATTALLLSFLGRRTIQAGSQA MAGLAILANMLVPQDLQTLRVVFA VLGKGCFGISLTCLTIYKAELFPTPV RMTADGILHTVGRLGAMMGPLILM SRQALPLLPPLLYGVISIASSLVVLFF LPET\QGLPLPDTIQDLESQKSTAAQ GNRQEAVTVESTSL |
| 4009  | 9506                                    | Α | 4293                                | 3672                    | 3967   | LQPPPHGRRGLLHHLSPGHGPHHPP<br>VTPQTRSPAQP/PGQMGPRAPLGCC<br>LPPPPRPPTCRREK*TTETRFSPCWR<br>TRPWGPGPPRPLSRGGPLPCAPA  |
| 4010  | 9507                                    | A | 4294                                | 1773                    | 2213   | AHWLHLPRLPHHRAQWAAALQPG<br>PAGWGWSWQPQLCSAGRLLCHGAI<br>GRP/LSIFCWTWDLGASSCGHPAAR<br>SMMASGVTWTSRGMGEKRVSSTPF<br>PIFFPAASPPPPSRLPNCPFCHRTLAE<br>RAQHLASVRPGLHLSSPTCCMKCSC   |
| 4011  | 9508                                    | A | 4295                                | 1                       | 616  |  |
| 4012  | 9509                                    | A | 4296                                | 93                      | 502  | EERKRPHLGAWWENRKCFFSFQPD<br>FKAAECRETVARPSLSIPQDCLSVSL<br>ADTNQLCLEVRLARGVCRRRAHLS<br>PPVCIQSPLSQGH*LLCSK*SASIIGA<br>GLANFQGTDSLVAEHPVSWIIHNSN<br>FVFHPGYFRL   |
| 4013  | 9510                                    | A | 4297                                | 1537                    | 2360   | TCCTNVVWGAPPHRDSRVSDRVHS QKSRRACYGQRNKRPGG*G*ILISA KKQLLSPRR*LKVWPMRSASLQSM PLASPSPVCPPGLLFLWP*QALL\PS DCG/PLSLTRLSR*GG\PPRPHWCSR FRWLCARVLL   |
| 4014  | 9511                                    | A | 4298                                | 2                       | 418  | MEAPAELLAALPALATALALLLAW LLVRRGAAASPEPARAPPEPAPPAE ATGAPAPSRPCAPEPAASPAGPEEP GEPAGLGELGEPAGPGEPEGPGDPA AAPAEAEE/PGGGGEAGTHRGPRGP LPTPGAPAAAAVPRRARERGRGLQ PRLPPGSAEPAARRKCR  |
|   |   |   |                                     |                         |  | DULL PREPER WORKELLEY COOK   |
| 4016  | 9513                                    | A | 4300                                | 8808                    | 9100   | RKVLFFFFEMKSRSVA\RLGCSGTI  |

| SEQ ID                            | SEQ ID   | Me | SEQ ID NO:            | Nucleotide  | Nucleotide   | Amino acid sequence ( X=Unknown; *=Stop   |
|-----------------------------------|--|----|-----------------------|---|--|---|
| NO: of<br>nucleo-tide<br>sequence | NO: of peptide sequence                          |    | in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
| ļ                                 | <del>                                     </del> | 4  |                       |   | sequence   |   |
|                                   |  |    |                       |   |  | SAHCNLCLPGSSDSPASASRVAGMT<br>GAHNHIQLIFVFLVGMGFHHVGQA<br>GLELLT\*VIHPPQSPKVLGLQV  |
| 4017                              | 9514   | A  | 4301                  | 3   | 101  |   |
| 4018                              | 9515   | С  | 4302                  | 5673  | 5894   | MWQLTPAILALGEIEAGGLFEPRRV<br>KLAWPAQEELVSTKNTKISWVWW<br>RAPVVPATQEAEVGGSLELERSRLQ<br>*  |
| 4019                              | 9516   | A  | 4303                  | 1   | 241  |   |
| 4020                              | 9517   | A  | 4304                  | 58  | 180  |   |
| 4021                              | 9518   | A  | 4305                  | 2   | 325  | FFFFFFFFFETESLSVTQAGEPGHD<br>LGSLEPPPPRFKQFSCLSLPSS\WIYR<br>HVPPCPANFFFFLVETGFHHVGQAG<br>LKLLTSNDPPASASQSSGIRGVSHLT<br>RLVS   |
| 4022                              | 9519   | Α  | 4306                  | 206   | 386  |   |
| 4023                              | 9520   | Α  | 4307                  | 2   | 260  |   |
| 4024                              | 9521   | Α  | 4308                  | . 5   | 227  |   |
| 4025                              | 9522   | A  | 4309 .                | 676   | 1076   | FLLCFPPCLSPKFFLFLLGKIYSQSN<br>WCVIVNWRIELGWMFNKICDSKIIF<br>SLGSFLCKIKAHWGLWKSPTTSFQE<br>RSPFFSSLFRAMRAKPSRSMD/RLFF<br>ELLVKSLPVASPVEPLSVIAEQSSQI<br>CPCHGI  |
| 4026                              | 9523   | A  | 4310                  | 3   | 205  |   |
| 4027                              | 9524   | A  | 4311                  | 3   | 345  |   |
| 4028                              | 9525   | A  | 4312                  | 118   | 7473   |   |
| 4029                              | 9526   | A  | 4313                  | 1   | 297  |   |
| 4030 4031                         | 9527<br>9528                                     | A  | 4314 4315             | 366   | 504<br>2899  | MDAPKAGYAFEYLIETLNDSSHKKF FDVSKLGTKYDVLPYSIRVLLEAAV RNCDGFLMKKEDVMNILDWKTKQ SNVEVPFFPARVLLQDFTGIPAMVD FAAMREAVKTLGGDPEKVHPACPT DLTVDHSLQIDFSKCAIQNAPNPGG GDLQKAGKLSPLKVQPKKLPCRGQ TTCRGSCDSGELGRNSGTFSSQIENT PILCPFHLQPVPEPETVLKNQEVEFG RNRERLQFFKWSSRVLKNVAVIPPG TGMAHQINLEYLSRVVFEEKDLLFP DSVVGTDSHITMVNGLGILGWGVG GIETEAVMLGLPVSLTLPEVVGCEL TGSSNPFVTSIDVVLGITKHLRQVG VAGKFVEFFGSGVSQLSIVDRTTIA NMCPEYGAILSFFPVDNVTLKHLEH TGFSKAKLESMETYLKAVKLFRND QNSSGEPEYSQVIQINLNSIVPSVSG PKRPQDRVAVTDMKSDFQACLNEK VGFKGFQIAAEKQKDIVSIHYEGSE YKLSHGSVVIAAVISCTNNCNPSVM LAAGLLAKKAVEAGLRVKPYIRTSL SPGSGMVTHYLSSSGVLPYLSKLGF EIVGYGCSTCVGNTAPLSDAVLNA VKQGDLVTCGNFIWK\KNFEGRLC DCVRANYLASPPLVVAYAIAGTVNI DFQTEPLGTDPTGKNIYLHDIWPSR EEVHRVEEEHVILSMFKALKDKIEM |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | GNKRWNSLEAPDSVLFPWDLKSTY IRCPSFFDKLTKEPIALQAIENAHVL LYLGDSVTTDHISPAGSIARNSAAA KYLTNRGLTPREFNSYGARRGNDA VMTRGTFANIKLFNKFIGKPAPKTIH FPSGQTLDVFEAAELYQKEGIPLIIL AGKKYGSGNSRDW\AAKGPYLLGV KAVLAESYEKIHKDHLIGIGIAPLQF LPGENADSLG\LSGRETFSLTFPEELS PG\ITLNIQTSTGKVFSVIASFEDDV\ EITL\YKHG\GLLNFV\ARKFS  |
| 4032  | 9529                                    | A | 4316                                | 1   | 178  |  |
| 4033  | 9530                                    | A | 4317                                | 165   | 403  | PSSRSRAPSPTPTLCGASCCPTCPAC<br>FPAPSRRAGAAGGAG*RPRGGPTST<br>TCYGPTETWLYQLQTVGSRNTTRT<br>PKST  |
| 4034  | 9531                                    | A | 4318                                | 3   | 404  |  |
| 4035  | 9532                                    | A | 4319                                | 3   | 217  |  |
| 4036  | 9533                                    | A | 4320                                | 3   | 423  | SFFIHRTKGKGPLMSSSFKKLYFSLT TEALSFAKTPS/CQGQGCDKTRSRV TLQEWNDPLDHDLEAQLIYRHLLG VEAMLWERHRELSGGAEAGTMPTS PGKVPEDSLARLLRVLQDLREAHSS SPAGSPPSEPNCLLELQ   |
| 4037  | 9534                                    | A | 4321                                | 2   | 3040   | DPGVWLPPSRDPAMAKRSSLYIRIV EGKNLPAKDITGSSDPYCIVKVDNE PIIRTATVWKTLCPFWGEEYQVHLP PTFHAVAFYVMDEDALSRDDVIGK VCLTRDTIASHPKGFSGWAHLTEVD PDEEVQGEIHLRLEVWPGARACRL RCSVLEARDLAPKDRNGTSDPFVR VRYKGRTRETSIVKKSCYPRWNETF EFELQEGAMEALCVEAWDWDLVS RNDFLGKVVIDVQRLRVVQQEEGW FRLQPDQSKSRRHDEGNLGSLQLEV RLRDETVLPSSYYQPLVHLLCHEVK LGMQGPGQLIPLIEETTSTECRQDV ATNLLKLFLGQGLAKDFLDLLFQLE LSRTSETNTLFRSNSLASKSMESFLK VAGMQYLHGVLGPIINKVFEEKKY VELDPSKVEVKDVGCSGLHRPQTE AEVLEQSAQTLRAHLGALLSALSRS VRACPAVVRATFRQLFRRVRERFPG AQHENVPFIAVTSFLCLRFFSPAIMS PKLFHLRERHADARTSRTLLLLAKA VQNVGNMDTPASRAKEAWMEPLQ PTVRQGVAQLKDFITKLVDIEEKDE LDLQRTLSL*APPVKEGPLFIHRTKG KGPLMSSSFKKLYFSLTTEALSFAK MPSSKKSALIKLANIRAAEKVEEKS FGGSHVMQVIYTDDAGRPQTAYLQ C/KGVPFCVRVQSHWEK**YQGHQI YLAGSGIPTSVAKGPAAAEIQPTPAS WAPTIPVPSVGTSGAAATKKTRQC VNELNQWLSALRKVSINNTGLLGS YHPGVFRGDKWSCCHQKEKTDTDF RSVPQTGVQWRDLGSLQSPPPRVK QFSCLNLPSSWDDRHSPPSLANFFV |

| FPLEMGFHHVSQAALVLLILLILI   FDTESRSIIQAGVQWCNLGSLGSFFF   RLGFFSCLSLPSTTGASRICTQLSQGC   DKTRSRVTLQEWNDPLDHDLEAQL   IYRHLLGVEAMLWERHRELSGGA   DKTRSRVTLQEWNDPLDHDLEAQL   IYRHLLGVEAMLWERHRELSGGA   Adviverserververserververserververserververserververververververververververververve | SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|--|---|---|---|-------------------------------------|---|--|---|
| 4038   9535  | ·   |   |   |                                     |   | sequence   | FDTESRSIIQAGVQWCNLGSLQSPFP<br>RLG*FSCLSLPSTTGASHCTQLSQGC<br>DKTRSRVTLQEWNDPLDHDLEAQL<br>IYRHLLGVEAMLWERHRELSGGTE<br>AGTVPTSPGKVPEDSLARLLRVLQD   |
| DPYCIVKVDNEPIIRYRPHPQDRGA LSLSSARALPAKGTATVWKTLCFF WGEEYQVHLPPITHAVAFYVMDE DALSRDDVIGKVCLTRDTTASHPKG FSGWAHLTEVPDEEYQGEHLRLE VWPGARACRLRCSVLEARDLAPKD RNGTSDPFVRVRYKGRTRETSIVKK SCYPRWNETFEFELQEGAMEALCV EAWDWDLVSRNDFLGKVVIDVQR LRVVQQEEGWFRLQPDSKSRRHD EGNLGSLQLEVRLRGETVLPSSYYQ PLVHLLCHEVKLGMQGPGLIPLIE ETTSTECRQDVATNLLKLFLGQGLA KDFLDLLFQLELSRTSETNTLFRSN LASKSMESFLKFALHVYLAPSWAD TAGKRCKGGCREKVGSWSGTGGG RINVTCGGPQVAGMQYLHGVLGPII NKVFEEKKYVELDPSKVEVKDVGC SGLHRPQTEAEVLEQSAQTLRAHLG ALLSALSRSVRACPAVVKATFRQLF RRVRERFPGAQHENVPFIAVTSFLC LRFFSPAIMSPKLFHLRERHADARTS RTLLLLAKAVQNVGNMDTPASRAK EAWMEPLQPTVRQGVAQLKDFTIX LVDIEEKDELDLQRTLSLQAPPVKE GPLFHHRTKGKGPLMSSSFKKLYST TTEALSFAKTPSSKKSALIKLANIRA AEKVEEKSFGGSHVMQVIYTDDAG RPOTAYLQCKCVNFLNQWLSALRK VSINNTGLLGSYHPGVFRGDKWSC CHQI*NTGQGCDKTRVTG*PCREW NDLLDRDLESQLJVRHLLGVEAML WERHRELSGGAEAGTVPTKPLAKV PEDSLARLAPGCLQDLKEAHSSPA GSPPSEPNLASLEAADVRPALRSPC  4040 9537 A 4324 69 194  4040 9538 A 4325 1350 2203 TWRLDPQIISSPKPQPGGTYTLEVV KSSKSKKVLSPHP*WPPLRLWQRNG GSPEGGTQAPGSLPPPPPRFLSERV GSPKLSGGKREGSHPGGPPHITHP) DGEKKARSWYGLREAKDPTQKPS PHPVKPLSAAPVEGSDPROKQSRSSL SIALSSGLEKLKTVTSGSIQPYTQAP QAGQMYDTKRLKDSAVLDQSAKY YHLTHDELISLLLQRERELSQRDEH VQELESYIDRLLVRIMETSPTLLQIPP GPPK   | 4038  | 9535                                    | A | 4322                                | 308   | 658  |   |
| 4040 9537 A 4324 69 194  4041 9538 A 4325 1350 2203 TWRLDPQIISSPKPQPGGTYTLEVV KSSKSKKVLSPHP*WPPLRLWQR\G GSPEGGTQAPDGSLPPPPPRPKSERV GSPKLSGGKR/EGSHPGGPPHITHP/ DGEEKAKSSWFGLREAKDPTQKPS PHPVKPLSAAPVEGSPDRKQSRSSL SIALSSGLEKLKTVTSGSIQPVTQAP QAGQMVDTKRLKDSAVLDQSAKY YHLTHDELISLLLQRERELSQRDEH VQELESYIDRLLVRIMETSPTLLQIPP GPPK   | 4039  | 9536                                    | A | 4323                                |   | 2662   | DPYCIVKVDNEPIIRYRPHPQDRGA LSLSSARALPAKGTATVWKTLCPF WGEEYQVHLPPTFHAVAFYVMDE DALSRDDVIGKVCLTRDTIASHPKG FSGWAHLTEVDPDEEVQGEIHLRLE VWPGARACRLRCSVLEARDLAPKD RNGTSDPFVRVRYKGRTRETSIVKK SCYPRWNETFEFELQEGAMEALCV EAWDWDLVSRNDFLGKVVIDVQR LRVVQQEEGWFRLQPDQSKSRRHD EGNLGSLQLEVRLRDETVLPSSYYQ PLVHLLCHEVKLGMQGPGQLIPLIE ETTSTECRQDVATNLLKLFLGQGLA KDFLDLLFQLELSRTSETNTLFRSNS LASKSMESFLKFALHVYLAPSWAD TAGKRCKGGCREKVGSWSGTGGD RINVTCGGPQVAGMQYLHGVLGPII NKVFEEKKYVELDPSKVEVKDVGC SGLHRPQTEAEVLEQSAQTLRAHLG ALLSALSRSVRACPAVVRATFRQLF RRVRERFPGAQHENVPFIAVTSFLC LRFFSPAIMSPKLFHLRERHADARTS RTLLLLAKAVQNVGNMDTPASRAK EAWMEPLQPTVRQGVAQLKDFITK LVDIEEKDELDLQRTLSLQAPPVKE GPLFIHRTKGKGPLMSSSFKKLYFSL TTEALSFAKTPSSKKSALIKLANIRA AEKVEEKSFGGSHVMQVIYTDDAG RPQTAYLQCKCVNELNQWLSALRK VSINNTGLLGSYHPGVFRGDKWSC CHQI*I\TGQG\CDKTRVTG*PCREW NDLLDRDLE\SQLIYRHLLGVEAML WERHRELSGGAEAGTVPTKPLAKV PEDSLARLAPGCLQDLREAH\SSSPA |
| KSSKSKKVLSPHP*WPPLRLWQR\G GSPEGGTQAPDGSLPPPPPPRPKSERV GSPKLSGGKR/EGSHPGGPPHITHP/ DGEEKAKSSWFGLREAKDPTQKPS PHPVKPLSAAPVEGSPDRKQSRSSL SIALSSGLEKLKTVTSGSIQPVTQAP QAGQMVDTKRLKDSAVLDQSAKY YHLTHDELISLLLQRERELSQRDEH VQELESYIDRLLVRIMETSPTLLQIPP GPPK  | 4040  | 9537                                    | A | 4324                                | 69  | 194  |   |
| TUT4   7557   M   4540   2   701   | 4041  | 9538                                    | Α | 4325                                | 1350  | 2203   | KSSKSKKVLSPHP*WPPLRLWQR\G<br>GSPEGGTQAPDGSLPPPPPRPKSERV<br>GSPKLSGGKR/EGSHPGGPPHITHP/<br>DGEEKAKSSWFGLREAKDPTQKPS<br>PHPVKPLSAAPVEGSPDRKQSRSSL<br>SIALSSGLEKLKTVTSGSIQPVTQAP<br>QAGQMVDTKRLKDSAVLDQSAKY<br>YHLTHDELISLLLQRERELSQRDEH<br>VQELESYIDRLLVRIMETSPTLLQIPP   |
| 4043 9540 A 4327 2 410   |   |   |   |                                     |   |  |   |

| SEQ ID      | SEQ ID   | NIO          | SEQ ID NO:  | Nucleotide  | Nas-1            | Amino acid sequence (X=Unknown; *=Stop            |
|-------------|----------|--------------|-------------|-------------|------------------|---|
| NO: of      | NO: of   |              | in USSN     | location of | location of last | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide  |              | 09/770,160  | first codon | codon for last   | nucleotide insertion)                             |
| sequence    | sequence | -            | , , , , , , | for peptide | amino acid of    |   |
| ,           |          | ĺ            |             | sequence    | peptide          | ì   |
|             |          |              |             |             | sequence         | <u> </u>  |
| 4044        | 9541     | A            | 4328        | 295         | 780              |   |
| 4045        | 9542     | A            | 4329        | 1           | 2203             |   |
| 4046        | 9543     | A            | 4330        | 1           | 190              | RFIMLVRLVFNS*PQ/CDPPASASQS                        |
|             |          |              |             | 1           |                  | AGITGMSHRARPELSVLTQGFRNW                          |
|             | 1        |              |             |             |                  | AFRLLLQCHSPDFF                                    |
| 4047        | 9544     | A            | 4331        | 2           | 269              | 1   |
| 4048        | 9545     | A            | 4332        | 3           | 223              | DFEPSLQHCSSKLCRNILRASSCHSS                        |
| 4048        | 7545     |              | 4332        | 1           | 1 223            | WGRM*FPGSV*PTWKI*REESCEWS                         |
|             | ł        | }            |             | }           |                  | 1   |
| 40.40       |          | <del>ا</del> | 4000        | <u> </u>    | <u> </u>         | RTAINPKYKILLHGFVVRTVWR                            |
| 4049        | 9546     | Α            | 4333        | 2           | 366              | PCSEPPTRRSGATPSPHPGGCGAKL                         |
|             | 1        | 1            |             | -           | }                | CRNILRASSCHSSWGRM*FPGSV*P                         |
|             |          | 1            |             | İ           |                  | TWKI*REESCEWSCTAINPSTRSCCT                        |
|             | ĺ        |              |             |             |                  | VCGTNCLEETPTTCPSTRGLQCGRG                         |
|             |          | -            |             | l           |                  | LTRATGNCPRNDGLTLLSLN                              |
| 4050        | 9547     | A            | 4334        | 3           | 131              |   |
| 4051        | 9548     | A            | 4335        | 923         | 1442             | GGPCLCRPSWPAVLQVRSGLPTSIPS                        |
| 1           |          |              | ,           | 1           | *                | PWPLFCLPQSILLGPLEMPG*RPLLQ                        |
|             | ļ        |              |             |             |                  | RPFYRMSLRTCQRRVRCWTWSVRC                          |
|             | ĺ        | ĺ            |             | 1           |                  |   |
|             | 1        |              |             | 1           |                  | RTAWHTRVFLKLPDTFTNDSSTTGF                         |
|             |          |              |             |             |                  | *AKPSALLLSTGWS*WATA/CGGGA                         |
|             | İ        |              |             |             |                  | AALLATMLRAAYPAGQVLRLLPSP                          |
|             |          |              |             | L           |                  | PAPGAKLCRNILRASSCHSSWGRM                          |
| 4052        | 9549     | A            | 4336        | 1           | 137              |   |
| 4053        | 9550     | _ A          | 4337        | 876         | 1012             |   |
| 4054        | 9551     | A            | 4338        | 148         | 278              |   |
| 4055        | 9552     | В            | 4339        | 7           | 673              | MVEVTILMIMGLYRIYGFAVAVVS                          |
|             | }        | 1 1          |             |             |                  | MILSYNVCSEGEVVSVMFSFVVTSS                         |
|             | i        | 1 1          |             | 1           |                  | SCGMHRSTLLSSVYSHLIFDSAYVIN                        |
|             |          |              |             |             |                  | NVADALSRGFSMHCMHCDNLKTC                           |
|             |          |              |             |             |                  | HTSHGSVMAETAVINHKKRKNSPRI                         |
|             |          | 1 1          |             | 1 1         |                  | VQSNDLTEAAYSLSRDQKRMLYLF                          |
|             |          |              |             |             |                  | VDQIRKSDGTLQEHDGICEIHVAKY                         |
|             | 1        | li           |             |             |                  |   |
|             | 1        |              |             | 1           |                  | AEIFGLTSAEASKDIRQALKSFAGKE                        |
|             |          | ] ]          |             |             |                  | VVFYRPEEDAGDEKGYESFPWFIKX                         |
| 40.75       |          | 4.1          | 10.10       |             |                  | *   |
| 4056        | 9553     | A            | 4340        | 786         | 1088             |   |
| 4057        | 9554     | A            | 4342        | 1           | 66               |   |
| 4058        | 9555     | A            | 4343        | 2           | 80               |   |
| 4059        | 9556     | A            | 4344        | 8           | 258              |   |
| 4060        | 9557     | A            | 4345        | 5           | 383              |   |
| 4061        | 9558     | A            | 4346        | 99          | 634              | TTTMSSKRTKTKTTKKRPQRATSN                          |
|             |          |              |             | [ [         |                  | VFAMFDQSQIQEFKEAFNMIDQNR                          |
|             |          | 1 1          |             |             |                  | DGFIDKEDLHDMLASLGK\NPTDAY                         |
|             |          |              |             |             |                  | LDAMMNEAPGPINFTMFLTMFGEK                          |
|             |          |              |             |             |                  | LNGTDPEDVIRNAFACFDEEA\TGTI                        |
|             |          |              |             |             |                  |   |
|             |          | 1            |             |             |                  | QEDYLRE\LLTTMGDRFTDEE\VDEL                        |
|             |          |              |             | [           |                  | YREAPY*QKGGISNYIEFTRILTGRP                        |
| 10.60       | 0.5.50   | 11           |             | ļl          |                  | PKHKDD  |
| 4062        | 9559     | A            | 4347        | 1           | 966              |   |
| 4063        | 9560     | A            | 4348        | 3           | 215              |   |
| 4064        | 9561     | Ā            | 4349        | 1           | 1416             | NSGGSGGTSGSGSSSGQGKMGQS                           |
|             |          | 1            |             | <u> </u>    |                  | QSGGHGPGGGKKDDEDKKKKYEPP                          |
| i           |          |              |             | [           |                  | VPTRVGKKKKKKTKGPDAASKLPLV                         |
| l           |          |              |             | }           |                  | TPHTQCRLKLLKLERIKDYLLMEEE                         |
| İ           |          |              |             |             |                  | FIRNQEQMKPLEEKQEEERSKVDDL                         |
|             |          | 1 1          |             | , [         |                  | RGTPMSVGTLEEIIDDNHAIVSTSVG                        |
| J           |          |              |             | 1           |                  |   |
|             |          |              |             | <u> </u>    |                  | SEHYVSILSFVDKDLLEPGCSVLLN                         |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|----------------------------|--|---|
|   |   |   |                                     |                            |  | HKVHAVIGVLMDDTDPLVTVMKV EKAPQETYADIGGLDNQIQEIKESV ELPLTHPEYYEEMGIKPPKGVHPFG PTWPRVKTLLAKAVANQTS\ASFLR \VVGYELIQKYLGDGPKLVRELFRV A\EEHAPSIVFIDEIDAIGT\KRY\DSN SGGE\REFHRTNVGN*LEPVGMGFD SRG\DV\KVFPWATNRI\ETL\DPALI\ RPGRI\DR\KNEFPLPDEKTKKRIFQI HTSRMTLADDVTL\DDLIHGLKIDLS GA\DI\KAIC\TEAGL\MGL*GERRMK VTNEDFKKSKENVLYKKQEGTPEG LYL   |
| 4065  | 9562                                    | A | 4350                                | 2                          | 70   |   |
| 4066  | 9563                                    | A | 4351                                | 1                          | 1605   |   |
| 4067  | 9564                                    | A | 4352                                | 3                          | 193  |   |
| 4068  | 9565                                    | A | 4353                                | 3                          | 127  | LFHPCQDSQQHH*CVCCRLTGHGA<br>A*VHGPCQAVQTYRASH   |
| 4069<br>4070                                | 9566<br>9567                            | A | 4354<br>4355                        | 3                          | 323  |   |
| 4070  | 9568                                    | A | 4356                                | 49                         | 85<br>413  |   |
| 4072  | 9569                                    | A | 4357                                | 3                          | 338  |   |
| 4073  | 9570                                    | A | 4358                                | 1                          | 3735   |   |
| 4074  | 9571                                    | A | 4359                                | 2                          | 317  |   |
| 4075  | 9572                                    | B | 4360                                | 2576                       | 2685   | MDGKNSSGSKRYNRKRELSYPKNE SFNNQSRRSSSQKSKTFNKMPPQRG GGSSKLFSSSFNGGRRDEVAEAQRA EFSPAQFSGPKKINLNHLLNFTFEPR GQTGHFEGSGHGSWGKRNKWGHK PFNKELFLQANCQFVVSEDQDYTA HFADPDTLVNWDFVEQVRICSHEV PSCPICLYPPTAAKITRCGHIFCWAC ILHYLSLSEKTWSKCPICYSSVHKK DLKSVVATESHQYVVGDTITMQLM KREKGVLVALPKSKWMNVDHPIHL GDEQHSQYSKLLLASKEQVLHRVV LEEKVALEQQLAEEKHTPESCFIEA AIQELKTREEALSGLAGSRREVTGV VAALEQLVLMAPLAKESVFQPRKG VLEYLSAFDEETTEVCSLDTPSRPLA LPLVEEEEAVSEPEPEGLPEACDDLE LADDNLKEGTICTESSQQEPITKSGF TRLSSSPCYYFYQAEDGQHMFLHP VNVRCLVREYGSLERSPEKISATVV EIAGYSMSEDVRQRHRYLSHLPLTC EFSICELALQPPVVSKETLEMFSDDI EKRKRQRQKKAREERRRERRIEIEE NKKQGKCPEVHIPLENLQQFPAFKF LYLLLFEKPRKETGKNVAMKAENR CRRRPPPALNAMSLGPRRARSAPTA VAAEAPVDAAELPQRRRHRLRHGQ EQRLQQLLRLFGQQQRATAAPLRL GGASRRV* |
| 4076  | 9573                                    | A | 4361                                | 3                          | 93   |   |
| 4077  | 9574                                    | A | 4362                                | 1                          | 289  | VGNPQQEVQNIFKAKHPMDTEVTK<br>AKIIGFGSALLEEVDPNPANFVGAGI<br>IHTKTTQIGCLVRLEPNLQAQMYRL   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|--|
| 1078  | 0575                                    | 1 | 1262                                | <del>                                     </del>                    | 275  | T/LRTSKEAVSQRLCELLSAQF   |
| 4078  | 9575                                    | A | 4363                                | 2   | 2803   | RGLAVFISDIRNCKSKEAEIKRINKE LANIRSKFKGDKALDGYSKKKYVC KLLFIFLLGHDIDFGHMEAVNLLSS NRYTEKQIGYLFISVLVNSNSELIRLI NNAIKNDLASRNPTFMGLALHCIAS VGSREMAEAFAGEIPKVLVAGDTM DSVKQSAALCLLRLYRTSPDLVPM GDWTSRVVHLLNDQHLGVVTAAT SLITTLAQKNPEEFKTSVSLAVSRLS RIVTSASTDLQDYTYYFVPAPWLSV KLLRLLQCYPPPDPAVRGRLTECLE TILNKAQEPPKSKKVQHSNAKNAV LFEAISLIIHHDSEPNLLVRACNQLG QFLQHRETNLRYLALESMCTLASSE FSHEAVKTHIETVINALKTERDVSV RQRAVDLLYAMCDRSNAPQIVAEM LSYLETADYSIREEIVLKVAILAEKY AVDYTWYVDTILNLIRIAGDYVSEE VWYRVIQIVINRDDVQGYAAKTVF EALQAPACHENLVKVGGYILGEFG NLIAGDPRSSPLIQFHLLHSKFHLCS VPTRALLLSTYIKFVNLFPEVKPTIQ DVLRSDSQLRNADVELQQRAVEYL RLSTVASTDILATVLEEMPPFPERES SILAKLKKKKGPSTVTDLEDTKRDR SVDVNGGPEPAPASTSAVSTPSPSA DLLGLGAAPPAPAGPPPSSGGSGLL VDVFSDSASVVAPLAPGSEDNFARF VCKNNGVLFENQLLQIGLKSEFRQN LGRMFIFYGNKTSTQFLNFTPTLICS DDLQPNLNLQTKPVDPTVEGGAQV QQVVNIECVSDFTEAPVLNIQVHGS GGT\FQN\VSLQLPITLNKFFQPT\EK FCQDFFQRWKQTSNPQQEVHNIFK AKHPMDTEFTK\AKIIG\FGSELLAE VDPNPANFVGAG\II\HTKTTQI\GCP LRL*PNLQAQMY\RLTLRTSKEAVS\ Q\RLCELLSAQF |
| 4080  | 9577                                    | Α | 4365                                | 2   | 231  |  |
| 4081  | 9578                                    | A | 4366                                | 1   | 224  |  |
| 4082  | 9579                                    | Α | 4373                                | 131   | 381  |  |
| 4083  | 9580                                    | Α | 4374                                | 93  | 449  |  |
| 4084  | 9581                                    | A | 4375                                | 11  | 594  |  |
| 4085  | 9582                                    | A | 4376                                | 1   | 1410   |  |
| 4086  | 9583                                    | A | 4377                                | 1   | 66   |  |
| 4087  | 9584                                    | A | 4378                                | 1   | 553  | RRGPLSQNGSFGPSPVSGGECSPPLT<br>VEPPVRPLSATLNRRDMPRSEFGSV<br>DGPLPHPRWSAEASGKPSPSDPGSG<br>TATMMNS\SS*GSSPTRVLDEGMQT<br>VLQEPEVPSVPSITSLAERPVAVNM<br>APKGPPPFPGVPLMSTPMGGPVPPPI<br>RYGPPPQLCGPFGPRALPPPFGPGM<br>RPPLCLRE  |
| 4088  | 9585                                    | A | 4379                                | 1   | 3589   | AFLSKVEEDDYPSEELLEDENAINA<br>KRSKEKNPGNQGRQFDVNLQVPDR  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|---|---|---|-------------------------------------|-------------|--|---|
|   |   | L |                                     |             | sequence   |   |
|   |   |   |                                     |             |  | AVLGTIHPDPEIEESKQETSMILDSE  |
|   |   | ļ |                                     |             |  | KTSETAAKGVNTGGREPNTMVEKE  |
| 1   | }                                       |   | }                                   | 1           |  | RPLADKKAQRPFERSDFSDSIKIQTP  |
|   |   | 1 |                                     |             |  | ELGEVFQNKDSDYLKNDNPEEHLK  |
|   |   | 1 |                                     |             |  | TSGLAGEPEGELSKEDHGNTEKYM  |
|   |   | } |                                     | •           |  | GTESQGSAAAEPEDDSFHWTPHTSV   |
|   |   | j |                                     |             |  | EPGHSDKREDLLIISSFFKEQQSLQR  |
|   |   | 1 |                                     |             |  | FQKYFNVHELEALLQEMSSKLKSA  |
|   |   |   |                                     |             | ı  | QQESLPYNMEKVLDKVFRASESQIL   |
| ļ   | )                                       | } |                                     | ,           |  | SIAEKMLDTRVAENRDLGMNENNI  |
|   |   | 1 |                                     |             |  | FEEAAVLDDIQDLIYFVRYKHSTAE   |
|   | 1                                       |   | ŀ                                   | {           | }  | ETATLVMAPPLEEGLGGAMEEMQP  |
|   | j                                       | } |                                     | ļ           |  | LHEDNFSREKTAELNVQVPEEPTHL DQRVIGDTHASEVSQKPNTEKDLDP   |
|   |   |   |                                     | Į           |  | GPVTTEDTPMDAIDANKQPETAAEE   |
|   | 1                                       |   | 1                                   | {           |  | PASVTPLENAILLIYSFMFYLTKSLV  |
|   |   | ] | J                                   | ]           |  | ATLPDDVQPGPDFYGLPWKPVFITA   |
|   |   |   |                                     |             |  | FLGIASFAIFLWRTVLVVKDRVYQV   |
|   |   |   | }                                   | }           |  | TEQQISEKLKTIMKENTELVQKLSN   |
| 1   | İ                                       | ĺ |                                     |             |  | YEQKIKESKKHVQETRKQNMILSDE   |
|   |   |   |                                     | •           |  | AIKYKDKIKTLEKNQEILDDTAKNL   |
| 1   | ł                                       | l |                                     | }           |  | RVMLESEREQNVKNQDLISENKKSI   |
|   |   | İ | İ                                   |             |  | EKLKDVISMNASEFSEVQIALNEAK   |
|   |   |   |                                     |             |  | LSEEKVKSECHRVQEENARLKKKK  |
| 1   | }                                       | } |                                     |             |  | EQLQQEIEDWSKLHAELSEQIKSFE   |
|   |   | } | ł                                   |             |  | KSQKDLEVALTHKDDNINALTNCIT   |
| ĺ   | [                                       |   | f                                   |             |  | QLNLLECESESEGQNKGGNDSDEL  |
|   |   |   | }                                   |             |  | ANGEVGGDRNEKMKNQIKQMMDV   |
|   | ļ                                       | , |                                     |             |  | SRTQTAISVVEEDLKLLQLKLRASV   |
|   | [                                       |   |                                     |             |  | STKCNLEDQVKKLEDDRNSLQAAK  |
| i   |   |   |                                     |             |  | AGLEDECKTLRQKVEILNELYQQKE   |
| ,   | ,                                       | ļ | ļ                                   | ļ           |  | MALQKKLSQEEYERQEREHRLSAA  |
|   |   |   | ļ                                   |             |  | DEKAVSAAEEVKTYKRRIEEMEDE  |
| 1   | }                                       | } | 1                                   | }           |  | LQKTERSFKNQIATHEKKAHENWL<br>KARAAERAIAEEKREAANLRHKLL  |
|   |   | İ |                                     |             |  | ELTQKMAMLQEEPVIVKPMPGKPN  |
|   | <u>'</u>                                | 1 | ĺ                                   |             |  | TQNPPRRGPLSQNGSFGPSPVSGGE   |
| 1   | 1                                       | } | 1                                   |             |  | CSPPLTVEPPVRPLSATLNRRDMPR   |
| ļ   | į į                                     | 1 |                                     |             |  | SEFGSVDGPLPHPRWSAEASGKPSP   |
|   | [                                       | ( | Į.                                  |             |  | SDPGSGTATMMNSSSRGSSPT\RVL   |
| }   | Ì                                       |   | ļ                                   | }           |  | DEGK\VNMGPK\GAPSFPKEFPL\MS  |
|   |   | ] | ļ                                   |             |  | TPMGGPV\PPPIRYGPPPQLCGPFGP  |
|   | [                                       | ĺ |                                     |             |  | RHLPPPFGPGMRPPLGLREFAPGVP   |
|   |   |   | }                                   | ]           |  | PGRRDLPLHPRGFLPGHAPFRPLGS   |
|   |   |   |                                     |             |  | LGPREYFIPGTRLPPPTHGPQEYPPP  |
|   | <b>[</b>                                |   | [                                   |             |  | PAVRDLLPSGSRDEPPPASQSTSQD   |
|   |   |   |                                     |             |  | CSQALKQSP   |
| 4089  | 9586                                    | A | 4380                                | 3           | 148  |   |
| 4090  | 9587                                    | A | 4381                                | 1885        | 2826   | CLQEAIMDGTEIAVSPRSLHSELMC   |
| 1   |   |   | 1                                   | }           |  | PICLDMLKNTIGSA*ASVPLTDHSGL  |
|   | ]                                       |   | }                                   | ]           |  | PFSYPRNKECPTCRKKLVSKRSLRP   |
|   |   |   | ŀ                                   |             |  | DPNFDALISKIYPSREEYEAHQDRV   |
| }   | }                                       | } | ł                                   |             |  | LIRLSRLDRGGTLGGGTLGPPSPPGA  |
|   | 1                                       |   | Į                                   | ·           |  | PSPPEPGGDPYLQSSSEALWL*ACPP  |
|   |   |   | [                                   |             |  | SHSRYVKTTGNATVDHLSKYLALRI   |
|   | }                                       |   | ]                                   |             |  | ALERRQQEAGEPGGPGGASDTG  |
|   |   |   | ]                                   |             |  | GPDGCGGEGGGAGGGDGPEEPALP   SLFHLLQLSSLFSPLSLLPPPQTLNGS  |
| L   |   | L | <u></u>                             | L           | L  | 3LFHLLQL33LF3FL3LLFFFQTLNU3   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | location of last codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|---------------------------------|--|
|   |   |   |                                     |                         |                                 | LTLELVNSPRRPLPRQGLTLRALSLP<br>GSPQHPGKLLTGGCALGFSTPATLH<br>TGKQPYVCAT  |
| 4091  | 9588                                    | A | 4382                                | 2                       | 456                             | DRGGTLGGGTLGPPSPPGAPSPPEP GGDPYLQSSSEALWL*ACPPSHSRY VKTTGNATVDHLSKYLALRIALERR QQEAGEPGGPGGGASDTGGPDGC GGEGGGAGGGDGPEEPALPSLFHLL QLSSLFSPLSLLPPPQTLNGSLTLEL V   |
| 4092  | 9589                                    | A | 4383                                | 58                      | 1262                            | CLQEAIMDGTEIAVSPRSLHSELMC PICLDMLKNTMTTKECLHRFCSDCI VTALRSGNKECPTCRKKLVSKRSLR PDPNFDALISKIYPSREEYEAHQDRV LIRLSRLHNQQALSSSIEEGLRMQA MHRAQRVRRPIPGSDQTTTMSGGE GEPGEGEGDGEDVSSDSAPDSAPGP APKRPRGGGAGGSSVGTGGGGTGG VGGGAGSEDSGDRGGTLGGFPSPPGAPSPPEPGGEIELVFRPHPLLV EKGEYCQTRYVKTTGNATVDHLSK YLALRIALERRQQEAGEPGGPGG GAS\NTEELNVCGGEGGGAGGGDG\ PKEPA\LPSLEGVSEKQYTIYIAPGG GAFTTL\NGSLT\LELVNE\KFWKVS RP\LELCYAPHPRIQSDPHPGDKPEE RGPLG |
| 4093  | 9590                                    | A | 4384                                | 3                       | 221                             |  |
| 4096  | 9591<br>9592<br>9593                    | A | 4386<br>4387<br>4388                | 3                       | 990<br>493                      | HSIMMKIPWGSIPVLMLLLLLGLIDI SQAQLSCTGPPAIPGIPGIPGTPGPDG QPGTPGIKGEKGLPGLAGDHGEFGE KGDPWIPGNPGKVGPKGPMGPKGG PGAPG\APGPKG\DSGDYKATQKIAF SATRTINVP/LLRRSQT\IRFRPRCITN MNT\NYE\PRSGKFTLQGCPGLY*FN LSTPSSRG\NLCVN\LMRGRERAQE/ VWVTFC\DYCLTNTFPGSPQGGNGP QLKKAPKGGGGGEKKTVLPAGPPN KNFTYWGMGGCPTAIFSGFLAFFQI WEGLTCGLASHPTPAPPAQQRSLYP QQQPYDQAKCTQ  |
| 4097  | 9594                                    | В | 4389                                | 272                     | 2158                            | MGPLMVLFCLLFLYPGLADSAPSCP QNVNISGGTFTLSHGWAPGSLLTYS CPQGLYPSPASRLCKSSGQWQTPGA TRSLSKAVCKPVRCPAPVSFENGIY TPRLGSYPVGGNVSFECEDGFILRG SPVRQCRPNGMWDGETAVCDNGA GHCPNPGISLGAVRTGFRFGHGDKV RYRCSSNLVLTGSSERECQGNGVW SGTEPICRQPYSYDFPEDVAPALGTS FSHMLGATNPTQKTKESLGRKIQIQ RSGHLNLYLLLDCSQSVSENDFLIF KESASLMVDRIFSFEINVSVAIITFAS EPKVLMSVLNDNSRDMTEVISSLEN ANYKDHENGTGTNTYAALNSVYL MMNNQMRLLGMETMAWQEIRHAI                                |

| SEQ ID      | (SEQ ID  | Me  | SEQ ID NO: | Nucleotide  | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop           |
|-------------|----------|-----|------------|-------------|---------------------|---|
| NO: of      | NO: of   |     | in USSN    | location of | location of last    | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | K K      | ď   | 09/770,160 | first codon | codon for last      | nucleotide insertion)                             |
| sequence    | sequence |     |            | for peptide | amino acid of       |   |
| 1           |          | ļ   | 1          | sequence    | peptide<br>sequence |   |
|             |          | _   |            |             |                     | ILLTDGKSNMGGSPKTAVDHIREIL                         |
|             |          |     | •          |             | [                   | NINQKRNDYLDIYAIGVGKLDVDW                          |
| 1           | ļ        | -   | ł          |             |                     | RELNELGSKKDGERHAFILQDTKAL                         |
|             |          |     |            |             |                     | HQVFEHMLDVSKLTDTICGVGNMS                          |
| 1           | 1        | 1   | 1          | 1           | 1                   | ANASDQERTPWHVTIKPKSQETCR                          |
| ]           | j.       | 1   | ]          |             | 1                   | GALISDQWVLTAAHCFRDGNDHSL                          |
|             |          | 1   | 1          | 1           | 1                   | WRVNVGDPKSQWGKEFLIEKAAIS                          |
|             |          | -   | į          | 1           | }                   | PGFDVFAKKNQGILEFYGDDIALLK                         |
|             |          | 1   | ļ          | 1           |                     | LAQKVKMSTHARPICLPCTMEANL                          |
| l           |          |     |            |             | l                   | ALRRPQGSTCRDHENELLNKQSVL                          |
|             |          |     | <u> </u>   |             |                     | CTFWSPLNGSKPKI*                                   |
| 4098        | 9595     | A   | 4390       | 2           | 201                 |   |
| 4099        | 9596     | A   | 4391       | 1           | 130                 |   |
| 4100        | 9597     | A   | 4392·      | 2           | 215                 |   |
| 4101        | 9598     | A   | 4393       | 3           | 300                 |   |
| 4102        | 9599     | A   | 4394       | 3           | 310                 |   |
| 4103        | 9600     | A   | 4395       | 2           | 228                 |   |
| 4104        | 9601     | A   | 4396       | 2           | 448                 | PRVRKDAVRDGLRAVKNAIDDGCV                          |
|             | 1        |     |            | -           |                     | V/PGAGAVEVAMAEALNKYKLSVK                          |
| }           |          |     | j          | ļ           | ]                   | GKAQLGVQAFADALLVIPKVLAQN                          |
| •           |          |     |            | ĺ           |                     | SGFDLQETLVKI*AEHSESGQLVGV                         |
| Į           | 1        |     | ļ          |             | ļ                   | DLNTGEPVVAAEAGI\WDNDCVKK                          |
|             |          |     |            |             |                     | QLLHSCTVIATNILLVDEIMRAGMS                         |
| i           |          |     | ĺ          |             |                     | SLKG  |
| 4105        | 9602     | A   | 4397       | 2           | 100                 | CEAC  |
| 4106        | 9603     | A   | 4398       | 3           | 174                 |   |
| 4107        | 9604     | A   | 4399       | 1           | 147                 |   |
| 4108        | 9605     | A   | 4400       | 1           | 104                 | <del> </del>                                      |
| 4109        | 9606     | A   | 4401       | 153         | 480                 | TTLKQQFSFMSYKAVKLKVFLIMSC                         |
|             |          |     |            |             |                     | YPRNPSHFP*CGA/WVMCPLRVGSE                         |
| 1           | 1        | - [ |            | 1           |                     | RRLCPFMATS\QSLSNKFHNRKIFMS                        |
|             | Ì        |     |            |             |                     | REIKFRRNLLKKNETQLMYLQIFRW                         |
|             |          |     |            |             |                     | YTKQRLFLF   |
| 4110        | 9607     | A   | 4402       | 1           | 186                 |   |
| 4111        | 9608     | A   | 4403       | 3           | 478                 |   |
| 4112        | 9609     | В   | 4404       | 56          | 390                 | XAAYVQPFLDKSGLEKYLYPASAA                          |
|             |          |     |            |             |                     | APFPLLYPGIPAAAAAFPCLSSVLSP                        |
|             | [        |     |            | <b>1</b>    |                     | PPEKAGAAAATLLPHEVAPLGAPHP                         |
|             | Į        |     |            |             |                     | QHPHGRTHLPFAGPREPGNPESSAQ                         |
|             | [        |     |            | [           |                     | EDPSQPGKEAP*                                      |
| 4113        | 9610     | A   | 4405       | 2           | 485                 |   |
| 4114        | 9611     | A   | 4406       | 105         | 183                 |   |
| 4115        | 9612     | A   | 4407       | 1           | 1560                | MLRKKEKANYRLLAERTRKRPRKA                          |
|             |          |     |            | ]           |                     | SAELQRKHYLPMLRGHLRLFLPGRL                         |
|             |          |     |            | 1           |                     | RPLPSNPRLAFPAAERGGGHCGPMR                         |
|             |          |     |            | ]           |                     | HFPVSTQERGTADPVHPASPLPPNQ                         |
|             |          |     |            | [ [         |                     | APNAGHSPPTPRSPPNTSSPRRRRR                         |
|             | }        |     |            |             |                     | PESGWGRPGGGFTSILRPDSPLPTRV                        |
|             |          |     |            |             |                     | QYGTERKRRGQSSRDAFSARRQSV                          |
| İ           |          | 1 1 |            | 1 1         |                     | GGGANWEGGGAKRARRGTGPAG                            |
|             |          |     |            |             |                     | WRAEGGGAACRGSARASPAFRGRG                          |
|             |          |     |            |             |                     | PLPPFASGRVPGRQCGLRQWLQEK                          |
|             |          | 1 1 |            |             |                     | LLGPSDHLSCFQMPGTSVCDCAACL                         |
|             |          | [   |            |             |                     | RACTEKPCDSNMWDSQAPWTGLK                           |
|             |          | 1 1 |            |             |                     | TRLTYRIFTINDLRQDWWRDYFEK                          |
|             |          | 1 1 |            |             |                     | YGKIETIEVMEDRQSGKKRGFAFVT                         |
|             |          |     |            |             |                     | FDDHDTVDKIVGRGGGSGNFMGRG                          |
|             | ·        |     |            |             | <del></del>         |   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho           | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---------------|-------------------------------------|---|--|--|
|   |   |               |                                     |   |  | GNFGGGGGNFGRGGNFGRGGYG<br>GGGGGSRGSYGGGDGGYNGFGGD<br>GGNYGGGPGYSSRGGYGGGPGY<br>GNQGGGYGG/G/GGGYDGYNEGGN<br>FGGGNYGGGGNYNDF\GNYSG\QQ<br>QS\NYGPMKGGSLGG\RSSGSPYGG<br>GYGSG\G\GSGGYGSRRF   |
| 4116  | 9613                                    | A             | 4408                                | 2   | 370  |  |
| 4117  | 9614                                    | A             | 4409                                | 1   | 159  |  |
| 4118  | 9615                                    | A             | 4410                                | 3   | 261  |  |
| 4119  | 9616                                    | A             | 4411                                | 1   | 8748   |  |
| 4120  | 9617                                    | A             | 4412                                | 1   | 2176   |  |
| 4121  | 9618                                    | A             | 4413                                | 37  | 441  |  |
| 4122  | 9619                                    | A             | 4414                                |   | 1940   | PVLRHAVWLKSEGKSSFGLCAPLR KGSFLQKSWIFFRPVMADKLTRIAI VNHDKCKPKKCRQECKKSCPVVR MGKLCIEVTPQSKIAWISETLCIGCG ICIKKCPFGALSIVNLPSNLEKETTH RYCANAFKLHRLPIPRPGEVLGLVG TNGIGKSAALKILAGKQKPNLGKY DDPPDWQEILTYFRGSELQNYFTKI LEDDLKAIIKPQYVDQIPKA\AKGTV GSILDRKDETKTQAIVCQQLDLTHL KERNVEDLSGGELQRFACAVVCIQ KADIFMFDEPSSYLDVKQRLKAAITI RSLINPDRYIIVVEHDLSVLDYLSDFI CCLYGVPSAYGVVTMPFSVREGINI FLDGYVPTENLRFRDASLVFKVAET ANEEEVKKMCMYKYPGMKKKMG EFELAIVAGEFTDSEIMVMMLGENG MGKTTFIRMLAGRLEPDEEGEVPVL NVSYKLQKISPKSTGSVRQLLREKIR DAYTHPQFVTNVMKPLQIENIIDQE VQTLSGGELQRVT\LAL*LGQNLPD VYLI\DEPPA\YLDS\EQRLMAARVV KRFIPHAKKTA\FVVGTWTFIM\ATY L\ADRVIVFD\GVPSTKNTVANSPQT\ LLAGMNKFLSQLEITFRRDPNNYRP RINKLNSIKDVEQKKSGN\YFFLDD |
| 4123  | 9620                                    | Α             | 4415                                | 1   | 122  |  |
| 4124  | 9621                                    | Α             | 4416                                | 2   | 1382   |  |
| 4125  | 9622                                    | A             | 4417                                | 135   | 282  |  |
| 4126  | 9623                                    | A             | 4418                                | 2   | 1652   |  |
| 4127  | 9624                                    | A             | 4419                                | 3   | 279  |  |
| 4128<br>4129                                | 9625                                    | A             | 4420                                | 8   | 353  |  |
| 4129  | 9626<br>9627                            | A             | 4421<br>4422                        | 1   | 1542   |  |
| 4131  | 9627                                    | A             | 4422                                | 70  | 496  |  |
| 4131  | 9628                                    | A             | 4424                                | 1   | 365<br>3771  |  |
| 4132  | 9630                                    | A             | 4424                                | $\frac{1}{2}$   | 285  |  |
| 4134  | 9631                                    | A             | 4425                                | 1   | 724  |  |
| 4134  | 9632                                    | A             | 4426                                | 58  | 197  |  |
| 4136  | 9633                                    | $\frac{A}{A}$ | 4428                                | 640   | 813  |  |
| 4137  | 9634                                    | A             | 4429                                | 3   | 268  |  |
| 4138  | 9635                                    |               | 4430                                | 1   | 1512   |  |
| 4139  | 9636                                    |               | 4431                                | 3   | 1625   | <del></del>  |
| 4140  | 9637                                    | A             | 4432                                | $\frac{3}{1}$   | 330  | GKTITLEVEPSDTIENVKAKIQDKEG   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | IPPDQQRLIFAGKQLEDGRTLSDYNI<br>QKESTLHLVLRLRGGI\KYNCDKMI<br>CRKCYARLHPRAVNCRKKKCGHT<br>NNLRPKKKVK  |
| 4141  | 9638                                    | A | 4433                                | 2                       | 544  | DPRLQFFFFFLSSLLQRGDRAGWW<br>RRFFGTQTCRVFVKTL\TGKNLHPL<br>RYETQ*HPLKNVQKPKISRTKEGIP\<br>PDQAAS**FAGK\QLE\DGRT\LSDY\<br>NIQKESTRAPWLLRLR\GGIIEPFSPP<br>GLPKKYN\CDKMI\CRKCYAR/LFHP<br>RCLSTCRK\KKCGSHQTTLRPQRRR<br>SNKGGFFP  |
| 4142  | 9639                                    | A | 4434                                | 385                     | 499  |   |
| 4143  | 9640                                    | A | 4435                                | 2                       | 127  |   |
| 4144  | 9641                                    | A | 4436                                | 3                       | 424  |   |
| 4145  | 9642                                    | A | 4437                                | 1                       | 110  |   |
| 4146  | 9643                                    | A | 4438                                | 1                       | 110  |   |
| 4147  | 9644                                    | A | 4439                                | 1                       | 110  |   |
| 4148  | 9645                                    | A | 4440                                | 1                       | 110  |   |
| 4149  | 9646                                    | A | 4441                                | 1 1                     | 108  |   |
| 4150  | 9647                                    | A | 4442                                | 3429                    | 7466   |   |
| 4151  | 9648                                    | A | 4443                                | 4048                    | 4181   |   |
| 4152  | 9649                                    | A | 4444                                | 682                     | 829  |   |
| 4153  | 9650                                    | A | 4445                                | 163                     | 320  | EFEGFNPLKLGEAGWARWLTPVIPA<br>L*ETEAGGSRGQEIETILANTVKPHL<br>Y  |
| 4154  | 9651                                    | A | 4446                                | 1122                    | 1446   |   |
| 4155  | 9652                                    | В | 4447                                | 124                     | 27844  | XRSTVPPRISAYERPVPWPGEWNDP RGPGRRASAVVSPREGNWGVLRDP RLQARKPRMVRSRQMCNTNMSVP TDGAVTTSQIPASEQETLVRPKPLLL KLLKSVGAQKDTYTMKEVLFYLGQ YIMTKRLYDEKQQHIVYCSNDLLG DLFGVPSFSVKEHRKIYTMIYRNLV VVNQQESSDSGTSVSENRCHLEGGS DQKDLVQELQEEKPSSSHLVSRPST SSRRAISETEENSDELSGERQRKRH KSDSISLSFDESLALCVIREICCERSS SSESTGTPSNPDLDAGVSEHSGDWL DQDSVSDQFSVEFEVESLDSEDYSL SEEGQELSDEDDEVYQVTVYQAGE SDTDSFEEDPEISLADYWKCTSCNE MNPPLPSHCNRCWALRENWLPEDK GKDKGEISEKAKLENSTQAEEGFDV PDCKKTIVNDSRESCVEENDDKITQ ASQSQESEDYSQPSTSSSIIYSSQEDV KEFEREETQDKEESVESSLPLNAIEP CVICQGRPKNGCIVHGKTGHLMAC FTCAKKLKKRNKPCPVLTGHIRTEQ PIIILPKKHKKKKERKSLPEEDVAVS SNVFDFTLTKKKVYLNNKLKERSV FKGFQGMGQHWTGFINLDKPSNPS SHEVVAWIRRILRVEKTGHSGTLDP KVTGCLIVCIERATRLVKSQQSAGK EYVGIVRLHNAIEGGTQLSRALETL TGALFQRPPLIAAVKRQLRVRTIYES KMIEYDPERRLGIFWVSCEADTYSR |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |    | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----|-------------------------------------|-------------------------|---|---|
| 4156  | 9653                                    | A  | 4448                                |                         | 129   | TLCVHLGLLLGVGGQMQELRRVRS GVMSEKDHMVTMHDVLDAQWLY DNHKDESYLRRVVYPLEKLLTSHK RLVMKDSAVNAICYGAKIMLPGVI RYEDGIEVNQEIVVITTKGEAICMV EHDKEFFHPRYHHREFRFDLSKIPE GEAVTAAEFRIYKDYIRERFDNETF RISVYQGIGSLPARQPYLWASEEGW LVFDITATSNHWVVNPRHNLGLQL SVETLDGQTINPKLAGLIGRHGPQN KQPFMVAFFKATEVHFRSIRSTGSK QRSQNRSKTPKNQEALGWPTMCTD ELSFGDLIVTLQSLFEKRTAAGTRG RPCKKHELYVSFRDLGWQDWIIAPE GYARYYCEGECAFPLNSYMNATNH AIVQTLVHFINPETVPKPCCAPTQLN AISVLYFDDSSNVILKKYRNMVVRA CGCH* |
| 4157  | 9654                                    | В  | 4449                                |                         | 462   | MSQQYYVRLCQIQPSPSRSVGRENL VLVGDFPDPTELKRVKGRGCAHCG LTDLPEPTAQVLVEQGQDEALWFH NVISEEFGVGVNIFWKHLPSECYDK TDTYGNKDPTAASRAAQILDRALK TLAELPEEYRDFYARRMVLHIQDK AYSKNSE*  |
| 4158  | 9655                                    | A  | 4450                                | 3                       | 366   |   |
| 4159<br>4160                                | 9656<br>9657                            | A  | 4451                                | 2                       | 167<br>382  | TMVLSPADKTNVKAA/WGMFLSFP<br>TTKTYFPHFDLSHGSAQVKGHGKK<br>VADALTNAVAHVDDMPNALSALS<br>DLHAHKLRVDPVNFKLLSHCLLVT<br>LAAHLPAEFTPAVHASLDKFLASVS<br>TVLTSKYR  |
| 4161  | 9658                                    | A  | 4453                                | 2                       | 252   |   |
| 4162  | 9659                                    |    | 4454                                | 31                      | 449   | MVLSPADKTNVKAAWGKTYFPHF<br>DLSPGSAQVKGHGKKVADALTNA<br>VAHVDDNAQRAVRPKRPCTRTSFG<br>WTRSNFKLLSHCLLVTLAAHLPAEF<br>NPCGARLPGQVPGFCYAPC*   |
| 4163  | 9660                                    | A  | 4455                                | 2                       | 81  |   |
| 4164  | 9661<br>9662                            | A  | 4456<br>4457                        | 3                       | 81<br>452   |   |
| 4166  | 9663                                    | AA | 4458                                | 1                       | 493   | RPRIRHEHRLRENPPWFLFPAAKTN VKAGLG*G*GSHPPSNVAKTLER\M FLSFPTT\KTYFPQLRTLSHGF\SQV* GPRSRRLPDALTKRPWRHVDDHAQ TRCPALSDLH\AHKL\RVDPVNFKLL SHCLLVTLAAHLPAEF\TPAVHAYL DKFLASVSTVLTSKYR  |
| 4167  | 9664                                    | В  | 4459                                | 208                     | 420   | MGNPKVKAHGKKVLTSLGDAIKHL<br>DDLKGTFAQLSELHCDKLHVDPEN<br>FKLLGNVLVTSLAIHFGIEFTPE*  |
| 4168  | 9665                                    | A  | 4460                                | 40                      | 534   | SRRHGSVSHREAKATIASLWGKVN<br>VEDAGGET\MIRL\LVVYPWPQRSF<br>ASF\SSLFSASAIMGNPKVKA\HGKK<br>VLTSLGDAIKHLDDLKGTFAQLSEL  |

| SEQ ID<br>NO: of | SEQ ID<br>NO: of    |                | SEQ ID NO:   | Nucleotide<br>location of  | Nucleotide<br>location of last  | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible   |
|------------------|---------------------|----------------|--------------|----------------------------|---------------------------------|--|
|                  | peptide<br>sequence |                | 09/770,160   | first codon<br>for peptide | codon for last<br>amino acid of | nucleotide insertion)  |
|                  |                     | 1              |              | sequence                   | peptide<br>sequence             |  |
|                  |                     |                |              |                            |                                 | HCDKLHVDPENFKLLGNV\LVTVLA IHF\GKEFTPEVQA\SWQKM\VT\GV ANA\LSSTYHLNSLPMMQNF  |
| 4169             | 9666                | A              | 4461         | 2                          | 171                             | ANA (COST THE NOET MINIQIN)  |
| 4170             | 9667                | B              | 4462         | 10                         | 351                             | MAPRTLVLLLSGALALTQTWAGSH   |
|                  |                     |                | 1.02         |                            |                                 | SMRYFYTSVSRPGRGEPRFIAVGYV<br>DDTQFVRFDSDAASQRMEPRAPWI<br>EQEGPEYWDRNTRNVKAHSQTDR<br>VDLGTLRGYYRCVSHSL*   |
| 4171             | 9668                | A              | 4463         | 1                          | 986                             |  |
| 4172             | 9669                | Α              | 4464         | 3                          | 1282                            |  |
| 4173             | 9670                | A              | 4465         |                            | 1004                            | MAVMAPRTLLLLLLGALALTQTWA GSHSMRYFTTSVSRPGRGEPRFIAV GYVDDTQFVRFDSDAASQRMEPRA PWIEQEGPEYWDRNTRNVKAHSQI DRVDLGTLRGYYNQSEAGSHTIQM MYGCDVGSDGRFLRGYQQDAYDG KDYIALNEDLRSWTAADMAAQITQ RKWEAARVAEQLRAYLEGTCVEW LRRHLENGKETLQRTDPPRTHMTH HAVSDHEATLRCWALSFYPAEITLT WQRDGEDQT\HTCHVQHEGLPKPL TLRWEPSSQPTIPIVGIIAGLVLFGAV ITGAVVAAVMWRRKSSDRKGGSYS QAASSDSAQGSDVSLTACKV |
| 4174             | 9671                | A              | 4466         | 1090                       | 2175                            |  |
| 4175             | 9672                | A              | 4467         | 1                          | 780                             |  |
| 4176             | 9673                | A              | 4468         | 59                         | 169                             |  |
| 4177             | 9674                | A              | 4469         | 89                         | 134                             |  |
| 4178             | 9675                | A              | 4470         | 864                        | 1885                            |  |
| 4179             | 9676                | A              | 4471         | 89                         | 176                             |  |
| 4180             | 9677                | A              | 4472         | 1                          | 1127                            |  |
| 4181             | 9678<br>9679        | A              | 4473         | $\frac{1}{2}$              | 405                             |  |
| 4182             | 9679                | A              | 4474<br>4475 | 3                          | 199                             | ļ  |
| 4183             | 9680                | A              | 4476         | 3 1017                     | 607<br>2029                     |  |
| 4185             | 9682                | $\frac{A}{A}$  | 4477         | 844                        | 1572                            |  |
| 4186             | 9683                | $+\frac{A}{A}$ | 4478         | 1                          | 846                             | <u> </u>   |
| 4187             | 9684                | $\frac{A}{A}$  | 4479         | 452                        | 1220                            |  |
| 4188             | 9685                | $\frac{A}{A}$  | 4480         | 1                          | 1254                            |  |
| 4189             | 9686                | A              | 4481         | 1                          | 1383                            | <del> </del>   |
| 4190             | 9687                | A              | 4482         | 1                          | 1290                            |  |
| 4191             | 9688                | A              | 4483         | 666                        | 1606                            |  |
| 4192             | 9689                | A              | 4484         | 1                          | 1236                            |  |
| 4193             | 9690                | A              | 4485         | 1                          | 1269                            |  |
| 4194             | 9691                | A              | 4486         | 719                        | 1175                            |  |
| 4195             | 9692                | A              | 4487         | 1                          | 1182                            |  |
| 4196             | 9693                | Α              | 4488         | 1                          | 1377                            |  |
| 4197             | 9694                | Α              | 4489         | 1                          | 1335                            |  |
| 4198             | 9695                | A              | 4490         | 1                          | 2456                            |  |
| 4199             | 9696                | Α              | 4491         | 1                          | 1827                            |  |
| 4200             | 9697                | Α              | 4492         | 1                          | 1011                            |  |
| 4201             | 9698                | A              | 4493         | 452                        | 950                             |  |
| 4202             | 9699                | A              | 4494         | 1                          | 1433                            |  |
| 4203             | 9700                | A              | 4495         | 1                          | 1933                            |  |
| 4204             | 9701                | A              | 4496         | 641                        | 2107                            |  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ 1D NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|---|
| 4205  | 9702                                    | A   | 4497                                | 1   | 2582   |   |
| 4206  | 9703                                    | A   | 4498                                | 1   | 1095   |   |
| 4207  | 9704                                    | A   | 4499                                | 1544  | 525  |   |
| 4208  | 9705                                    | A   | 4500                                | 2   | 161  |   |
| 4209  | 9706                                    | A   | 4501                                | 3   | 452  |   |
| 4210  | 9707                                    | A   | 4502                                | 25  | 622  | EFHRLRENPPWFLFPAAKTNVRA\A WG*RSGAHAG\EYGAEALER\MVLF PPPTPKPYFPELRT*AHGFCPKVKGP TAKKV\AERA*PNAVA\HVDGHAPN GAVPP*ADLQRRTSFRVDPVNFQAP *ATCLLVTL\AAH\LPAEFTP\AV\HA SLGQVPGLSVSTVLTSKIPVKLEPSV GHAFLPLWAFPPAPPPLSCTRTPVG L |
| 4211  | 9708                                    | A   | 4505                                | 2   | 213  |   |
| 4212  | 9709                                    | Α   | 4506                                | 2   | 382  | TMVLSPADKTNVKAA/WGMFLSFP<br>TTKTYFPHFDLSHGSAQVKGHGKK<br>VADALTNAVAHVDDMPNALSALS<br>DLHAHKLRVDPVNFKLLSHCLLVT<br>LAAHLPAEFTPAVHASLDKFLASVS<br>TVLTSKYR  |
| 4213  | 9710                                    | A   | 4507                                | 2   | 252  |   |
| 4214  | 9711                                    | A   | 4508                                | 1   | 466  | WSPQTQREPTMVLSPADKTNVKAA WGKVGAHAGEYGAEALGR\IFLSFP P\TKTYFPHFDLSPGSAQVKGHG\KK VADALTNAGAHVDD\MPNALSSPE ATLHAHKLRVDPI\NFKLLSHCLLVT LAAHLPAEF\TPAVHASLDKFLASV STVLTSKYR   |
| 4215  | 9712                                    | A   | 4509                                | 256   | 391  | NELHAENLKNEDDVDTGLLGFWTL<br>LIISLTAGFSCCSFSWTVTYFDSFEP<br>GMFPPTPLSPARFKK*R*CRHWTIRI<br>LDSTYNIPNCWILLLQLFLDSDLL  |
| 4216  | 9713                                    | A   | 4510                                | 2   | 490  |   |
| 4217  | 9714                                    | A   | 4511                                | 1   | 160  |   |
| 4218  | 9715                                    | A   | 4512                                | 1   | 150  |   |
| 4219  | 9716                                    | A   | 4513                                | 1   | 73   |   |
| 4220<br>4221                                | 9717<br>9718                            | A   | 4514<br>4515                        | 186   | 213  | ISPFYHLCQMLKTADVLRRMALWR<br>CRDALLS*GGSSIEIPLFLLYGSRELG<br>LGFCFTGMNHCAQSIYNRF  |
|   |   |     |                                     |   | 365  | MFQLLYDSLXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 4222  | 9719                                    | A   | 4516                                | 251   | 454  | GGSSIEIPLFLLYGSRARTWILF*EM<br>AAGRVQWLTSVIPALWEAEAGGSR<br>GQEFKTSLAKRVKPHLY   |
| 4223  | 9720                                    | A   | 4517                                | 3   | 192  |   |
| 4224  | 9721                                    | A   | 4518                                | 1   | 129  |   |
| 4225  | 9722                                    | A   | 4519                                | 23  | 115  |   |
| 4226  | 9723                                    | A   | 4520                                | 1   | 1582   | GRGWRAVLGWSRRRSGLEPATVGS SMALLFLLPLVMHGVSRAEMGTAD LGPSSVPTPTNVTIESYNMNPIVYW EYQIMPQVPVFTVEVKNYGVKNSE WIDACINISHHYCNISDHVGDPSNSL WVRVKARVGQKESAYAKSEEFAV CRDGKIGPPKLDIRKEEKQIMIDIFH PSVFVNGDEQEVDYDPETTCYIRVY          |

| SEQ ID<br>NO: of | SEQ ID<br>NO: of |               | SEQ ID NO:<br>in USSN | Nucleotide<br>location of |                     | Amino acid sequence ( X=Unknown; *=Stop                                 |
|------------------|------------------|---------------|-----------------------|---------------------------|---------------------|---|
| nucleo-tide      | peptide          | d             | 09/770,160            | 1                         | location of last    | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence         | sequence         |               | ,                     | for peptide               | amino acid of       | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                                 |
|                  |                  |               |                       | sequence                  | peptide<br>sequence |   |
|                  |                  | 1             |                       |                           |                     | NVYVRMNGSEIQYKILTQKEDDCD  |
| }                |                  | 1             | 1                     | 1                         | 1                   | EIQCQLAIPVSSLNSQYCVSAEGVL   |
|                  | 1                |               | 1                     |                           | ļ                   | HVWGVTTEKSKEVCITIFNSSIKGSL  |
| ĺ                |                  |               | (                     |                           | 1                   | WIPVVAALLLFLVLSLVFICFYIKKI  |
|                  |                  |               |                       |                           |                     | NPLKEKSIILPKSLISVVRSATLETKP   |
|                  |                  | 1             | •                     |                           |                     | ESKYVSLITSYQPFSLEKEVVCEEPL  |
|                  |                  |               |                       |                           |                     | SPATVPGMHTEDNPGKVEHTEELSS   |
| -                | İ                | 1             | 1                     | }                         | }                   | ITEVVTTEENIPDVVPGS\HLTPIERE   |
| J                | }                | ]             |                       | 1                         | ]                   | SSSPLSSNQSEPGSIALNSYHSRNCS  |
| İ                |                  | 1             |                       |                           |                     | ESDHSRNGFDTDSSCLESHSSLSDSE  |
|                  | 1                |               | Í                     | ľ                         |                     | FPPNNKGEIKTEGQELITVIKSPPPSF   |
|                  |                  |               | ļ                     | }                         |                     | C\YDKP\HVLVDLLV\DDSGKESL\IG   |
| 4227             | 9724             | $\frac{1}{A}$ | 4521                  | 1                         | 408                 | YRPT\EDSQRNFHEISLSCTQL  |
| 4228             | 9725             | $\frac{A}{A}$ | 4522                  | 2                         | 377                 |   |
| 4229             | 9726             | A             | 4523                  | 50                        | 326                 |   |
| 4230             | 9727             | A             | 4524                  | 3                         | 1948                | AAAAAAAVPASFGLCSRDPAPPQP  |
|                  |                  |               |                       |                           |                     | ASMSGIKKQKTENQQKSTNVVYQA  |
|                  |                  |               |                       | 1                         |                     | HHVSRNKRGQVVGTRGGFRGCTV   |
|                  |                  |               | 1                     |                           | i                   | WLTGLSGAGKTTISFALEEYLVSHA   |
| ]                |                  |               | }                     |                           |                     | IPCYSLDGDNVRHGLNRNLGFSPGD   |
| !                |                  |               |                       |                           |                     | REENIRRIAEVAKLFADAGLVCITSF  |
|                  |                  | 1             |                       | (                         |                     | ISPFAKDRENARKIHESAGLPFFEIFV   |
| 1                | }                | 1 :           |                       | 1 .                       |                     | DAPLNICESRDVKGLYKRARAGEIK   |
|                  |                  |               |                       |                           |                     | GFTGIDSDYEKPETPERVLKTNLST   |
| 1                |                  |               |                       | Į į                       |                     | VSDCVHQVVELLQEQNIVPYTIIKDI  |
| {                |                  |               |                       | 1                         |                     | HELFVPENKLDHVRAEAETLPSLSIT  |
| }                |                  |               | i                     |                           |                     | KLDLQWVQVLSEGWATPLKGFMR<br>EKEYLQVMHFDTLLDGMALPDGVI                     |
|                  |                  |               |                       |                           |                     | NMSIPIVLPVSAEDKTRLEGCSKFVL  |
| 1 1              |                  |               | •                     | ĺ                         | 1                   | A\HGGRRVAYLTETAEF/HTEHRKE   |
|                  | !                |               |                       |                           |                     | ERCS/RVFWGTTCTKHPHIK\MVME   |
| <u> </u>         |                  |               |                       | ]                         |                     | SGDWLVGGDLQVLEKIRWNDGLD   |
|                  |                  |               |                       |                           |                     | QYRLTPLELKQKCKEMNADAVFAF  |
| 1                |                  |               |                       |                           |                     | QLRNPVHNGHALLMQDTRRRLLER  |
| j j              |                  | 1 1           |                       |                           |                     | GYKHPVLLLHPLGGWTKDDDVPLD  |
|                  |                  |               |                       |                           |                     | WRMKQHAAVLEEGVLDPKSTIVAI  |
| 1 1              |                  | 1 1           |                       | ·                         |                     | FPSPMLYAGPTEVQWHCRSRMIAG  |
|                  |                  |               |                       |                           |                     | ANFYIVGRDPAGMPHPETKKDLYE  |
|                  |                  |               |                       |                           |                     | PTHGGKVLSMAPGLTSVEIIPFRVA   |
| ĺ [              | '                | 1 1           |                       |                           |                     | AYNKAKKAMDFYDLARHNEFDFIS  |
|                  |                  | 1 1           |                       |                           |                     | GTRMRKLAREGENPPDGFMAPKA   |
| 4221             | 0700             | 1.1           | 4525                  |                           |                     | WKVLTDYYRSLEKN  |
| 4231<br>4232     | 9728<br>9729     | A             | 4525<br>4526          | 66                        | 626<br>409          | I CI I OVETTNIDDEDDATEVI I IZAZ SIZ                                     |
| 7232             | J 147            | A             | 4320                  | 00                        | 409                 | LGLLQVTTTNPPSPPNTYLLKMLFK   |
| ]                |                  | 1 1           |                       |                           | -                   | LRTPPFISHHSFILKNYDIQYFSMRDI DRLGIQKVMERTFDLLIGKRQRPIH                   |
| ,                |                  |               | ļ                     | j                         |                     | LSFDIDAFDPTL\APATG\TPVVGGLT   |
|                  |                  | 1 i           |                       |                           |                     | YREGMYIAEEIH  |
| 4233             | 9730             | A             | 4527                  | 1                         | 1257                |   |
| 4234             | 9731             | A             | 4528                  | 3                         | 1086                | FSVLRIMSLRGSLSRLLQTRVHSILK  |
|                  |                  |               | ļ                     |                           |                     | KSVHSVAVIGAPFSQGQKRKGVEH  |
|                  |                  |               | [                     | 1                         | 1                   | GPAAIREAGLMKRLSSLGCHLKDFG   |
| 1                |                  | 1 1           |                       |                           |                     | DLSFTPVPKDDLYNNLIVNPRSVGL   |
|                  |                  |               |                       | 1                         |                     | ANQELAEVVSRAVSDGYSCVTLGG  |
|                  |                  |               |                       |                           | Ì                   | DHSLAIGTISGHARHCPDLCVVWV  |
|                  |                  | 1 1           |                       | l                         | (                   | DAHADINTPLTTSSGNLHGQPVSFL   |
|                  |                  | 1 1           | ,                     | J                         | j                   | LRELQDKVPQLPGFSWIKPCISSASI  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X≃Unknown; *=Stop<br>codon; /=possible nucleotide deletion; \=possible<br>nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|--|
|   |   |     |                                     |   |  | VYIGLRDVDPPEHFILKNYDIQ\YFP<br>MKDIDRLGIQKVMERTFDLLIGKRQ<br>RPIHLSFDIDAFDPTLAPATGTPVVG<br>GLTYREGMYIAEEIH\NTGLLSALDL<br>VEVNTQLATSNEEAKTTADLAVDV<br>IASSFGQTREGGHIVYDQLPTPSSPD<br>ESENQARVRI  |
| 4235  | 9732                                    | A   |                                     | 1   | 128  |  |
| 4236  | 9733                                    | A   | 4530                                | 3   | 126  |  |
| 4237  | 9734                                    | A   |                                     | 1   | 79   |  |
| 4238  | 9735                                    | В   | 4532                                | 214   | 268  | XELEKLVQVVRQLEAEPGLPPVQPV<br>FITVDPERDDVEAMARYVQDFHPR<br>LLGLTGSTKQDEDQDYIVDHSIAIY<br>LLNSDGLFTDYYGRSRSAEQISDSV<br>RRHMAAFRSVLS*   |
| 4239  | 9736                                    | A   | 4533                                | 23  | 257  | AYLIDDTEAQSRGSQAKATPLEGLR<br>TQPSSRPLGGIKLV*YEVLCLLMTA<br>LKAI/TQIQLPATSHSAARLRGVLPR<br>AIR  |
| 4240  | 9737                                    | A   | 4534                                | 3   | 229  |  |
| 4241  | 9738                                    | A   | 4535                                | 1   | 297  |  |
| 4242  | 9739                                    | A   | 4536                                | 67  | 552  | GPWRFCFSEAVSEPTTVAFDVRPGG VVHSFSHNVGPGDKYTCMFTYASQ GGTNEQWQMSLGTS\EDHQHFT\CT IWRPPRGKSYL\YFT\QFKAEVAGRL RFEYRHGLTFKARILKGESDVPLEN LRNFEV\TKTAVGSQGPGAFPKLTC PKLV\IVAKAS\RTEL   |
| 4243  | 9740                                    | A   | 4537                                | 2   | 232  | RDGTVHARAAKNRVISVLLPSDLV<br>H*LWEP*PDED*DA*SETGDIDHRV<br>TEESHE*PAFHNFMQESMAQYWKR<br>NNK   |
| 4244  | 9741                                    | A   | 4538                                | 2   | 1094   | RHPVCLLVLGMAGSGKTTFVQRLT GHLHAQGTPPYVINLDPAVHEVPFP ANIDIRDTVKYKEVMKQYGLGPNG GIVTSLNLFATRFDQVMKFIEKAQN MSKYVLIDTPGQIEVFTWSASGTIIT EALASSFPTVVIYVMDTSRSTNPVT FMSNMLYACSILYKTKLPFIVVMNK TDIIDHSFAVEWMQDFEAFQDALN QETTYVSNLTRSMSLVLDEFYSSLR VVGVSAVLGTGLDELFVQVTSAAE EYEREYRPEYERLKKSLANAES\QQ EREQLERLRKDMGSVALDAGTAKG VFTVDSLSPVLHPSDLILTRGTLDEE DEEADSDTDDIDHRVTEESHEEPAF QNFMQESMAQYWKRNNK |
| 4245  | 9742                                    | A   | 4539                                | 710   | 1053   |  |
| 4246  | 9743                                    | A   | 4540                                | 3   | 281  |  |
| 4247  | 9744                                    | A   | 4541                                | 30  | 320  |  |
| 4248  | 9745                                    | A   | 4542                                | 3   | 115  |  |
| 4249  | 9746                                    | A   | 4543                                | 1   | 137  |  |
| 4250  | 9747                                    | A   | 4544                                | 3   | 32   |  |
| 4251  | 9748                                    | A   | 4545                                | 1   | 135  |  |
| 4252  | 9749                                    | A   | 4546                                | 1   | 2694   |  |
| 4253  | 9750                                    | A   | 4547                                | 3   | 544  |  |
|   | 9751                                    | 1   | 4548                                |   |  |  |

| SEQ ID      | SEQ ID   | Me                                     | SEQ ID NO: | Nucleotide  | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop   |
|-------------|----------|--|------------|-------------|---------------------|---|
| NO: of      | NO: of   | tho                                    | in USSN    | location of | location of last    | codon; /=possible nucleotide deletion; \=possible   |
| nucleo-tide | peptide  | đ                                      | 09/770,160 |             | codon for last      | nucleotide insertion)   |
| sequence    | sequence |  |            |             | amino acid of       |   |
| ļ           |          |  | 1          | sequence    | peptide<br>sequence |   |
| 4255        | 9752     | A                                      | 4549       | 1           | 384                 |   |
| 4256        | 9753     | $\frac{A}{A}$                          | 4550       | 1           | 1299                | MASPVAAQAGKLLRALALRPRFLA  |
| 000         | ,,,,,    | A                                      | 1220       | 1 *         | 1277                | AGSQAVQLTSRRWLNLQEYQSKKL  |
| }           | }        |  | Į.         | 1           | 1                   | MSDNGVRVQRFFVADTANEALEAA  |
| 1           | }        |  | 1 .        | · ·         | 1                   | KRLNAKEIVLKAQILAGGRGKGVF  |
|             | Į        |  | 1          | 1           |                     | NSGLKGGVHLTKDPNVVGQLAKQ   |
| }           | 1        | 1                                      | 1          | 1           | 1                   | MIGYNLATKQTPKEGVKVNKVMV   |
|             | 1        |  | -          |             | 1                   | AEALDISRETYLAILMDRSCNGPVL   |
|             | ļ        | 1                                      | 1          |             |                     | VGQPQGGVDIEEVAASNPELIFKEQI  |
|             | 1        |  | Į.         |             | 1                   |   |
|             |          | ]                                      |            | 1           | 1                   | DIFEGIKDSQAQRMAENLGFVGPLK<br>SQAADQITKLYNLFLKIDATQVEVN  |
|             | 1        | 1                                      | İ          | 1           | ļ                   | PFGETPEGQVVCFDAKINFDDNAEF   |
| }           | 1        | 1                                      | Į          |             | 1                   | RQKDIFAMDDKSENEPIENEAAKYD   |
|             |          | J 1                                    |            | }           | j                   | LKYIGLDGNIACFVNGAGLAMATC  |
|             |          | 1                                      | ]          |             | Į                   | DIIFLNGGKPANFLDLGGGVKEAQV   |
|             | 1        | {                                      |            | 1           | (                   | YQAFKLLTADPKVEAILVNIFGGIV   |
| }           | 1        | J 1                                    | ļ          | }           | )                   | NCAIIANGITKACRELELKVPLVVRL  |
| [           |          |  | ļ          |             | -                   | CAHANGITKACRELELKVPLVVRL<br>  EGANVQEAQKILNNS\GLPITSAIDL  |
| 1           | 1        | 1                                      | †          | 1           |                     | EDAAKKAVASVAMK  |
| 4257        | 9754     | $\frac{1}{A}$                          | 4551       | 1           | 590                 | RVRTKDPNVVGQLAKQMIGYNLAT  |
| , 22,       | 7,54     | ^                                      | .551       | *           | 550                 | KQTPKEGVKVNKVMVAEALDISRE  |
| (           | 1        |  |            | 1           | 1                   | TYLAILMDRSCNGPVLVGSPQGGV  |
|             | 1        | } }                                    |            |             |                     | DIEEVAASNPELIFKEQIDIFEGIKDS   |
|             |          | i                                      |            |             | Į                   | QAQRMAENLGFVGPLKSQVEAILV  |
| [           | (        | 1                                      | 1          | (           | ĺ                   | NIFGGIVNCAIIA\NGIPKACRELELK   |
| ] .         |          |  | <b> </b>   | 1           |                     | VPLVVRLEGTNVQEAQKILNNSGLP   |
| 1           |          |  |            |             | ļ                   | ITSA\IDLEDA\AKKAVA\SVAKK  |
| 4258        | 9755     | A                                      | 4552       | 3           | 168                 | THE TAXABLE PARTY OF THE PARTY |
| 4259        | 9756     | A                                      | 4553       | 3           | 95                  |   |
| 4260        | 9757     | A                                      | 4554       | 3           | 354                 |   |
| 4261        | 9758     | A                                      | 4556       | 1           | 95                  |   |
| 4262        | 9759     | A                                      | 4557       | 156         | 364                 | GPVE*KPVEEESRGLLD*GLPGMD  |
| }           |          |  | ļ          | 1           | l                   | WGWVFGKGGDPPLAQSLNCPSFTV  |
|             |          |  |            |             |                     | SEIIGRDLSGFPAPPGEEPPA   |
| 4263        | 9760     | A                                      |            | 1           | 2523                |   |
| 4264        | 9761     |  | 4559       | 3           | 469                 |   |
| 4265        | 9762     | A                                      | 4560       | 3           | 132                 |   |
| 4266        | 9763     | A                                      | 4561       | 1           | 2961                | MGAASCEDEELEFKLVFGEEKEAPP   |
| -           | · -      |  |            | Į           |                     | LGAGGLGEELDSEDAPPCCRLALGE   |
|             | ļ        | ] ]                                    |            |             | 1                   | PPPYGAAPIGIPRPPPPRPGMHSPPPR   |
|             | 1        |  | ļ          | į 1         | 1                   | PAPSPGTWESQPARSVRLGGPGGG  |
| 1           | ŀ        | 1 1                                    | <b>!</b>   | 1 1         | 1                   | AGGAGGGRVLECPSIRITSISPTPEPP   |
|             | ļ        | ]                                      |            | į l         | 1                   | AALEDNPDAWGDGSPRDYPPPEGF  |
| İ           | l        |  |            | Į I         | 1                   | GGYREAGAQGGGAFFSPSPGSSSLS   |
| ŀ           | •        | 1 1                                    | !          | 1 1         | 1                   | SWSFFSDASDEAALYAACDEVESEL   |
|             | ļ        |  |            | ļ ļ         | 1                   | NEAASRFGLGSPLPSPRASPRPWTPE  |
|             | 1        |  | 1          |             | ·                   | DPWSLYGPSPGGRGPEDSWLLLSAP   |
|             | !        |  | )          | ( )         | '<br>'              | GPTPASPRPASPCGKRRYSSSGTPSS  |
|             | l        |  | 1          | ļ l         | ;<br>               | ASPALSRRGSLGEEGSEPPPPPPLPL  |
| ļ           | Į.       |  | 1          | ų l         | '                   | ARDPGSPGPFDYVGAPPAESIPQKT   |
| }           | ľ        | 11                                     | 1          | 1 1         | ·                   | RRTSSEQAVALPRSEEPASCNGKLP   |
|             | 1        |  | 1          |             | '                   | LGAEESVAPPGGSRKEVAGMDYLA  |
|             | 1        |  |            | 1 1         | · ·                 | VPSPLAWSKARIGGHSPIFRTSALPP  |
| }           | ļ        | 1 1                                    | '          | 1           | İ                   | LDWPLPSQYEQLELRIEVQPRAHHR   |
|             | !        |  |            | 1           | '                   | AHYETEGSRGAVKAAPGGHPVVKL  |
|             | 1        |  |            | 1           | ·                   | LGYSEKPLTLQMFIGTADERNLRPH   |
|             | Ţ        | 1 1                                    | '          | 1           | i l                 | AFYQVHRITGKMVATASYEAVVSG  |
|             | 1        | ــــــــــــــــــــــــــــــــــــــ |            | <u> </u>    |                     | 1 × 11111 OKM 1 AUTO I DAY 1 AO   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop<br>codon; /=possible nucleotide deletion; \=possible<br>nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | TKVLEMTLLPENNMAANIDCAGIL KLRNSDIELRKGETDIGRKNTRVRL VFRVHVPQGGGKVVSVQAASVPIE CSQRSAQELPQVEAYSPSACSVRGG EELVLTGSNFLPDSKVVFIERGPDG KLQWEEEATVNRLQSNEVTLTLTV PEYSNKRVSRPVQVYFYVSNGRRK RSPTQSFRFLPVICKEEPLPDSSLRGF PSASATPFGTDMDFSPPRPPYPSYPH EDPACETPYLSEGFGYGMPPLYPQT GPPPSYRPGLRMFPETRGTTGCAQP PAVSFLPRPFPSDPYGGRGSSFPLG\L PFSPPAPFRPPPLPASPPLEGPFPSQS DVHPLPAEG\YNKVGPGYGPGEGAP EQEKSRGGYSSGFRDSVPIQGITLEE VSEIIGRDL\SGFPETSLEKKPPALKP RETVITLATPAPASALPPFPPFLELV ATEAWGQPLAPLSPSFCLSHCLPLPS PSLGCGPQAWLAALEGLGGKECVE EGGG |
| 4267  | 9764                                    | A | 4562                                | 19                      | 387  |   |
| 4268  | 9765                                    | A | 4563                                | 1                       | 373  |   |
| 4269  | 9766                                    | A | 4564                                | 2                       | 343  |   |
| 4270  | 9767                                    | В | 4565                                | 19                      | 507  | MEANGLGPQGFPELKNDTFLRAAW GEETDYTPVWCMRQAGRYLPEFRE TRAAQDFFSTCRSPEACCELTLQPL RRFPLDAAIIFSDILVVPQALGMEVT MVPSKGPSFPEPLREEQDLEALRDP EVEASKLGYGFQAITPYPTTTGWDV CRLIGFCWCPHGP*   |
| 4271  | 9768                                    | A | 4566                                | 3                       | 339  |   |
| 4272  | 9769                                    | A | 4567                                | 3                       | 679  |   |
| 4273  | 9770                                    | A | 4568                                | 1                       | 139  |   |
| 4274  | 9771                                    | A | 4569                                | 1                       | 526  | HERFETTYFKKFP\GYYVTGDGCQR<br>DQDGYYWITGRIDDMLNVSGHLLS<br>TAEVESALVEH*RLLQEA\AVVGHP<br>HPCEGVNASYCFVTLCDGHTFSPKL<br>TEELKKA\VMRKRLAPFATPDYIQN<br>APGLPKT\RSGKIMRRVLRKICS/VT<br>DHDLGDMSTVADPS\VISHLFSHRC<br>LTIQ   |
| 4275  | 9772                                    | A | 4570                                | 537                     | 2357   | GVCHQRRLAPQAWPGAGTDSLLLA TRWATGAPGHCCWHLPARHTCGSP GLSPVPQPASAGPPGGLLWERHSRE YIKTWRPR/YFLLKSDGSFIGYKERP/ EAPDQTLPPLNNFSVAGCLGMS\EC QLMKTERPRPNT/FVIRCLQWTTVIE RTFH/VDSPDE/REEWMRAIQMVAN SLKQ/RAPGEDPMDYKCGSPSD/SST TEEMEVAVSKARA/KVGTFGKVILV REKAT/GRYYAMKILRKEVIIA/KVR APGIALASLCGGCVCLQDEVAHTV/ TESRVLQNTRHPFLTALKYAFQTHD RL/CFVMEYANGAVFHLSRERVFTE ERAR/FYGAEIVSALEYLHSRD/VVY RDIKLCAQEKGDTHSP*KVSPSLSSR ITLAPTGTTQVSTVRGTSDP/AVECS   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | HSGTPHSSWNELQLHTTVWTRLIG<br>YVEGKPHRGAVPRYMGVGQRVLE<br>DN/DYGRAVDWWGLGVVMYE/MM<br>CGRLPFYNQDHERLF/ELILMEEIRF<br>PRTLSP/EAKSLLAGLLKKDPKQ/RL<br>LP/PFKPQVTSEVDTRYFDD/EFTAQ<br>SITITPPDRCECWGPRAESRCLPHAE<br>PSSAAVPDGFPAGPLSPQDAWRGR<br>RGWRRERAGAAGRTRVRRGHLPE<br>VMPAFLAS   |
| 4276  | 9773                                    | A | 4571                                | 64                      |  | VTAYHAATMNEVSVIKEGWLHKR GEYIKTWRPRYFLLKSDGSFIGYKE RPEAPDQTLPPLNNFSVAECQLMKT ERPRPNTFVIRCLQWTTVIERTFHV DSPDEREEWMRAIQMVANSLKQRA PGEDPMDYKCGSPSDSSTTEEMEV AVSKARAKVTMNDFDYLKLLGKG TFGKVILVREKATGRYYAMKILRKE VIIAKDEVAHTVTESRVLQNTRHPF LTALKYAFQTHDRLCFVMEYANGG ELFFHLSRERVFTEERARFYGAEIVS ALEYLHSRDVVYRDIKLENLMLDK DGHIKITDFGLCKEGISDGATMKTF CGTPEYLAPEVLEDNDYGRAVDW WGLGVVMYEMMCGRLPFYNQDHE RLFELILMEEIRFPRTLSPEAKSLLA GLL\KKDPKQRLG\GGPSDAKEVME HRFFLSINWQDVVQKKLLPPFKPQV TSEVDTRYFDDEFTAQSITITPPDRY DSLGLLE\LDQRT\HFP\QFSYSASIRE |
| 4277  | 9774                                    | A | 4572                                | 2                       | 423  |   |
| 4278  | 9775                                    | A | 4573                                | 1                       | 106  |   |
| 4279  | 9776                                    | A | 4574                                | 3                       | 58   |   |
| 4280  | 9777                                    | A | 4575                                | 1                       | 191  |   |
| 4281  | 9778                                    | A | 4576                                | 3                       | 325  |   |
| 4282  | 9779                                    | A | 4577                                | 3                       | 277  |   |
| 4283  | 9780                                    | С | 4578                                | 77                      | 292  | MVDFCPPCSICFXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 4284  | 9781                                    | A | 4579                                | 645                     | 849  |   |
| 4285  | 9782                                    | A | 4580                                | 3                       | 140  | EANKENREAQMAAKLERLPEKD*A /HLEEVRKNK\ESKDPADETEAD  |
| 4286  | 9783                                    | A | 4581                                | 49                      | 605  | NSARGLSLSQLIVQNTLPVACLLFT MASSDIQVKELEKRASGQAFELILSP RSKESVPEFPLSPPKEEGFFPGGKFR EN*EAAEERRQSP*SCSS*RQLAEKR E\HGKEVL\QKAIEENNNFQ*NGQK RKLTPHKMEA**RDPREATNGLPKL EPFAEEKDKAH*KKCRKN\KESQRP CPRRDLKPD  |
| 4287  | 9784                                    | A | 4582                                |                         | 567  | VVREPAFSLA/EAQFTARYFSTSSIP NV\NKAPV\RIRRSKHM*QGVTLPVI E\HYHEGTDSL*TALV*ARVGNQLA KLKR\NYAKAVELLVQLASLQTSFV TLDEAIKITNRRVNAIEHVIIPRIERT LAYIITELDEREREEFYRLKKIQEKK  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|---------------------------------|--|
|   | 1                                       |   |                                     |   |                                 | KILKEKSEKDLEQRRAAGEVLEPAN<br>LLAEEKDEDLLFE   |
| 4288  | 9785                                    | A | 4583                                | 1   | 748                             | MSGKDRIEIFPSRMAQTIMKARLKG AQTGRNLLKKKSDALTLRFRQILKK IIETKMLMGEVMREAAFSLAEAKFT AGDFSTTVIQNVNKAQVKIRAKKD NVAGVTLPVFEHYHEGTDSYELTG LARGGE\QLAKLKRNYAKAVELLV ELASLQTSFVTLDEAIKIT\NRRVNAI EHVIIPRIERTLAYIITELDERV\REEF YRLKKIQEKKKILKEKSEKDLEQRR AAGEVLEP\ANLL\AEEKDEDLLFE                      |
| 4289  | 9786                                    | A | 4584                                | 166   | 238                             |  |
| 4290  | 9787                                    | A | 4585                                | 53  | 203                             |  |
| 4291  | 9788                                    | A | 4586                                | 357   | 498                             |  |
| 4292  | 9789                                    | A | 4587                                | 262   | 397                             |  |
| 4293  | 9790                                    | A | 4588                                | 68  | 422                             |  |
| 4294  | 9791                                    | A | 4589                                | 70  | 361                             |  |
| 4295  | 9792                                    | A | 4590                                | 259   | 2603                            |  |
| 4296  | 9793                                    | A | 4591                                | 246   | 667                             |  |
| 4297  | 9794                                    | A | 4592                                | 25  | 471                             |  |
| 4298  | 9795                                    | A | 4593                                | 2   | 3788                            |  |
| 4299  | 9796                                    | A | 4594                                | 1   | 700                             |  |
| 4300  | 9797                                    | A | 4595                                | 604   | 1047                            | SNNRTDNPTSVAYLSKETDVVAKG WPHCLWVVVAVAILVLEAIKIIQGK DFTVWTSHDVNGILGAKGNSWLSD KRLLRYQALLLEGPVLQIHTCVALN PAIFLPEDGEPIKHDYQQIVAQTYVT *EDLLEVPLANPDLNLYTNGSSFV  |
| 4301  | 9798                                    | A | 4596                                | 1   | 1410                            |  |
| 4302  | 9799                                    | A | 4597                                | 510   | 755                             |  |
| 4303  | 9800                                    | A | 4598                                | 59  | 411                             | SWPSDKQTLVVQRGQKMEQANHP<br>DPTDHMSQLMWT/VLPQGFRDSPH<br>LFGQALAQDLGHFSSPGTLVLQYV<br>DDLLLATSSEASCQQATLALLNFLA<br>NQGYK/LSRSKAQLCLQQVKYLCL   |
| 4304  | 9801                                    | A | 4599                                | 1 1   | 565                             |  |
| 4305  | 9802                                    | A | 4600                                | 126   | 492                             | CNNSMTSLQVRLKVCPRPCRTSM/L<br>PIRII*KLPQVCLDLL*IREGEWDMY<br>PCWAKFPCPYSLKGT*PIAWGILWS<br>FGDFFAY/IPLMQQQKH*FSSQNTRR<br>NEEGQI*WPLLMHSQKPAPLPVV  |
| 4306  | 9803                                    | A | 4601                                | 1   | 342                             |  |
| 4307  | 9804                                    | A | 4602                                | 55  | 219                             | LGNKHLLGSIDPRGSWVTGEYIFLR PPIAA*GRQ*DFLPFPELWWTSLNNS WAFS  |
| 4308  | 9805                                    | A | 4603                                | 339   | 1371                            | ASHPLRGLLCGPSLPNEPCPLLHGT QSHRPLKG*GVRAHSTGLAGSSTCR PLRDPLGEASWAPESAQGL*IHQSA LCI*LKLKPAGQRAKLGDRLDIPDR RKSSTILGRAGDLQPAMPEPPTLSV GSCAAQASPMNPAPCSTAPSPIDHS RAEECGRIARDWQAAPPAGPCGIH WVKPAGLLSLLRDCKYTNRHSVSS SRFANTNQHPASSSGFVNAPIDTLY LANLVGTWRTFVASSGIVNAPISTL SKQTTWLYQSAGCGKESTQASGAQ |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|---|
|   |   |     |                                     |   |  | TGGTSFKSLETTGSISEASSAKHCTE LFSRFTTFNPDSVPSDGVVGDTAGT VWPGVLKGEPCHLGTCYRCVLDPH PTPSESDTIQGIHVQVCYMSTLHDA DVCDTNDPVTHNTKKYIYSTEIFTS NNPELRSEDETVFRALEKWKTSEQT IGEMDFYICNDPHPDSALYQNGLSK MQDTVSLSVFSPSVAA  |
| 4309  | 9806                                    | A   | 4604                                | 749   | 1002   | QLKKGTNSLLVSKPSPVWIPTGTLT<br>QIMGTGVANIC*PVF*KD*GELGKM<br>NYAMMSTITQGKEENPAFLKWLWE<br>ALRKYTPLSP  |
| 4310  | 9807                                    | A   | 4605                                | 1   | 1632   |   |
| 4311  | 9808                                    | A   | 4606                                | 307   | 543  |   |
| 4312  | 9809                                    | A   | 4607                                | 1   | 1149   |   |
| 4313  | 9810                                    | A   | 4608                                | 119   | 409  | GDICHHLGLTPVGSHSLLSCSR*QV<br>A*VGAVTAATIGTGILLQQLAFLVC<br>NWLLLSGSSENFPRSALICFKSEREK<br>GTCIQVGPNSPPPTACKGHN  |
| 4314  | 9811                                    | A   | 4609                                | 1   | 2433   |   |
| 4315  | 9812                                    | В   | 4610                                | 97  | 1065   | MHAVHTSLLVERTILTTTKERGSTL QYPLRPGAHKGLQDIVKRFKAQALI RKCSSPCNTPILGVQKPNGQWRLV QDLRLINEAVIPLYPVVPNPYNLLSQ IPEEAEWFTVLDLKDAFFCIPLHSDS QFLFAFEDPTDHTSQLTWTVLPPGF RDSPPLFGQALAQDLGHFSSPGTLV LQYVDDLLLATSSEASCQQATLDLL NFLANQGYKTHSRDSDAPVGFTDR HLVATEKIPRGREPLSSLAVYTRGR PTRTGARRTIVSRIRRDFRFFYRYLA QREPPLYQQSLLIHLQLDSQPALSV VIGKVPNVVELTPNFGTAAQV*   |
| 4316  | 9813                                    | A   | 4611                                | 1   | 2403   |   |
| 4317  | 9814<br>9815                            | A   | 4612 4613                           | 1 1908  | 2838<br>4698   | SNDRTEDDCGKHPFMSSPP\TEPWV CLIIEGQEIDFLLDTGTTFSVLIPCLG RLSSRSVTIQGILGQPVTRYFSHLLS CNWETLLFSHAFLVMPESPTPLLGR DILAKAGAIISMKTGNKLPICCPLLE GINPEVWALEGQFGRAKNAHPLQIR LKDPISFPYQRQYPLRPEAHKGLQDI VKHLKAQDSVRKCSSPCNTPILGVQ KLNSQWRLVQDLRLINEAVIPLYPV VRNPYTLLSQVPEEAEWFTVLDLK DAFFCIPLHSDSQFLFAFEDPTDHTS QLMWMVLPQRFRDSPHLFGQAQA QDLGHFSSPGTLVLQYSEIAKTLYT LIKEMERANTHLVEWEPEAETAFET LKQALVQAPALSLPTGQNFALYVIE RAGIALGVLTQTHRTTPQPVAYLSK EIDVVAKGWPHCLRTVVAVAVLVS EAIKIIQGKDFTVWTTHDVNGILGA KGGLWPSDNCLLRYQALLLEEPVL QIHMCIAINPATFLPEDGEPIKHDCQ QIIVQTYATQDDLLEVPLANPDFNL YNSGSSFVENGIQRAGYAIVSDVTV |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|----------------------------|--|--|
| 4319  | 9816                                    | A | 4614                                | 1529                       | 2945   | LGSKPLSPGTSTQLAELVALTRALE LGKGKRINVYTDSKYAYLILHAHA AIWKEREFLTSGGTPIKYHKEIMELL HTVQKPKEVAVLHCQSHQKGSARR IFCLTRIPGTRVCKNPHVSLSGISEW PLRDHTPLCFRPKALLAWVHEEICS MGCKDPGWNSLKVSEEDRKMQES LETSRDLLNGFDQNVDNDMDSKVQ AEGASDGDEELIGKWRKGLSMLW KILSIENMMNVWKDGTIKDAIIVIEK AVKAIKPETINSCQRNLCPDVVHDF TRFTTEPIKDIKEIGDLAIKLGIFESS NSTQFLNQFVPDDRLSPHNKLLKFY KPEFYSSYPLVSCLDHYVDQVGARI SMSFCVTTVTEASGSGSWTCGVSQ LKLSYAD   |
| 4320  | 9817                                    | A | 4615                                | 3                          | 374  |  |
| 4321  | 9818                                    | A | 4617                                | 3                          | 112  |  |
| 4322  | 9819                                    | A | 4618                                | 359                        | 465  |  |
| 4323  | 9820                                    | A | 4619                                | 3                          | 381  | MRILMVGLDAAGKTTILYKLKLGEI<br>VTTIPTIG\FIFVVDSNDRERIQEVAD<br>ELQKMLLVDELRDAVLLLFANKQD<br>LPNAMAISEMTDKLGLQSLRNRTW<br>YVQATCATQGTGLYEGLDWLSNEL<br>SKR  |
| 4324<br>4325                                | 9821                                    | A | 4620                                | 395                        | 552  |  |
|   | 9822                                    | В | 4621                                | 1289                       | 1603   | MVVTISPNFSLYRMVVLPAASNPTI<br>KMRICFLPNSREKREEIVRPMAVVA<br>LVMGRSRRGLGRPRAFSFQAPRQT<br>KREGRERAEEERGRQKRLSGPCAD<br>EDPAQE*  |
| 4326  | 9823                                    | A | 4622                                | 2                          | 116  |  |
| 4327  | 9824                                    | A | 4623                                | 156                        | 403  |  |
| 4328  | 9825                                    | A | 4624                                | 8                          | 2648   | WIQYSSTTLPNDWNKRKKKEKA MLSARAKTPRKPTV/KKGSQTNLKD PVG\YCRVRLGFPDQECCIEVINNTT VQLHTPEGYRLNRNGDYKETQYSF KQVFGTHTTQKELFDVVANPLVND LIHGKNGLLFTYGVTGSGKTHTMT GSPGEGGLLPRCLDMIFNSIGSFQAK RYVFKSNDRNSMDIQCEVDALLER QKREAMPNPKTSSSKRQVDPEFAD MITVQEFCKAEEVDEDSVYGVFVS YIEIYNNYIYDLLEEVPFDP/IKPKPP QSKLLRED\KNHNMYVAGCTEVEV KSTEEAFEVFWRGQKKRRIANTHL NRESSRSHSVFNIKLVQAPLDADGD NVLQEKEQITISQLSLVDLAGSERTN RTRAEGNRLREAGNINQSLMTLRTC MDVLRENQMYGTNKMVPYRDSKL THLFKNYFDGEGKVRMIVCVNPKA EDYEENLQVMRFAEVTQEVEVARP VDKAICGLTPGRRYRNQPRGPVGN EPLVTDVVLQSFPPLPSCEILDINDE QTLPRLIEALEKRHNLRQMMIDEFN KQSNAFKALLQEFDNAVLSKENHM |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |    | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence (X=Unknown; *=Stop<br>codon; /=possible nucleotide deletion; \=possible<br>nucleotide insertion)   |
|---|---|----|-------------------------------------|-------------------------|---|--|
|   |   |    |                                     |                         |   | QGKLNEKEKMISGQKLEIERLEKKN KTLEYKIEILEKTTIIYEEDKRNLQQ ELETQNQKLQRQFSEKRRLEARLQ GMVTETTMKWEKECERRVAAKQL EMQNKLWVKDEKLKQLKAIVTEPK TEKPERPSRERDREKVTQRSVSPSP VPLLFQPDQNAPPIRLRHRRSRSAG DRWVDHKPASNMQTETVMQPHVP HAITVSVANEKALAKCEKYMLTHQ ELASDGEIETKLIKGDIYKTRGGGQS VQFTDIETLKQESPNGSRKRRSSTV APAQPDGAES\EW\TDV\ETRCSVGC GR*GAGSQLGPGYQHH\AQPKRKK P |
| 4329  | 9826                                    | A  | 4625                                | 1                       | 331   |  |
| 4330  | 9827<br>9828                            | AB | 4626<br>4627                        | 136                     | 906   | XPELKPVDKESEVVMKFPDGFEKFS PPILQLDEVDFYYDLKHVIFSRLSVS ADLESRICVVGENGAGKSTMLKLL LGDLAPVRGIRHAHRNLKIGYFSQH HVEQLDLNVSACGTAGHASFLGRP EEEYXGWCDSGVPRMKRFIKAGVP GSCGYAKEGGVTRVERKDFDQYRA LLQGTVSAAKAFL*  |
| 4332  | 9829                                    | A  | 4628                                | 1                       | 233   |  |
| 4333  | 9830                                    | A  | 4629                                | 1                       | 312   |  |
| 4334  | 9831                                    | A  | 4630                                | 2                       | 119   |  |
| 4335  | 9832                                    | A  | 4631                                | 1                       | 145   |  |
| 4336  | 9833                                    | В  | 4632                                | 78                      | 236   | MSYIPGQPVTAVVQRVEIHKLRQGE<br>NLILGFSIGGGIDQDPSQNPFSEDKT<br>DK*   |
| 4337  | 9834                                    | A  | 4633                                | 102                     | 583   | IRVEMSYIPGQPGTAVVQRGEIHKL<br>RQGENLILGFSIGGGIDQDPSQNPFS<br>EDKTDKGIYVTRVSEGGPAEIAGLQ<br>IGDKIMQVNGWDMTMVTHDQ\AR<br>KRLHQALRRRLVRLL\VTRQS\LQK\<br>AVQQSMPVLAATTILRLLPAASLYS<br>NATSTLWSPSGFC  |
| 4338  | 9835                                    | A  | 4634                                | 1                       | 373   |  |
| 4339  | 9836                                    | A  | 4635                                | 3                       | 86  |  |
| 4340  | 9837                                    | A  | 4636                                | 1                       | 204   |  |
| 4341  | 9838                                    | A  | 4637                                | 1                       | 767   |  |
| 4342  | 9839                                    | A  | 4638                                | 20                      | 515   |  |
| 4343  | 9840                                    | A  | 4639                                | 3                       | 391   | HEESRSVSQAGVQWRYLGSLQRPP<br>PRFKRFSCLSPPSSWDHRCTTS*LAN<br>F\*YLVETGFHHVELLTSSDLPTSAS<br>QSAGITGVSHHAWPWFALNVFKDG<br>CESPWPHNKLEFYTAYYNFFNTGTT<br>LRPPL   |
| 4344  | 9841                                    | C  | 4640                                | 201                     | 368   | MGKSKXAFRXKSXGIVFIQGTFPXE<br>YNXXPRGIKVSQEXNXXXXXCXKI<br>GGEDVX*   |
| 4345  | 9842                                    | A  | 4641                                | 1                       | 307   | RLFFFFETVSHSVTQARVHLSHLGS<br>LQPLLPTFKQFSCLSLPGS*DYRRLL<br>LHPANF\*FSVETGFHHVGQAGLEL<br>LTSGDPPTSASQSAGITGVSHRAWP<br>ST  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----------|-------------------------------------|---|--|--|
| 4346  | 9843                                    | A        | 4642                                | 1   | 310  |  |
| 4347  | 9844                                    | A        | 4643                                | 49  | 360  | DRVSVTQAGVQWCNLGSLQPLPPR<br>FR*FSCLSLLSSWDYRRPPPRPANF\*<br>FLVETGFHHVGQAGLKLLTSSDPPT<br>SASQSAEITGVSHRAWPVLSSPQPFF<br>FF   |
| 4348  | 9845                                    | A        | 4644                                | 2   | 119  |  |
| 4349  | 9846                                    | A        | 4645                                | 1   | 276  | FFFFFFFLTQSLTHSVT\RLECSGVI<br>SAHCNLCLLGSSS*LASAS*VAGTT<br>GANHYAQLIFVFLVEMGFHHVGRA<br>GLKL/HDLK*SKVLGLQA  |
| 4350  | 9847                                    | A        | 4646                                | 2   | 273  | LRQFSLLLPRVECSGAISAHCNLCLL<br>GSSDSPASASRVSGITGTHHQTWLT<br>FFVFLVEMGFHHVGQAGLQLLT\*V<br>IRPPRPPKVLGLQA   |
| 4351  | 9848                                    | Α        | 4647                                | 1   | 106  |  |
| 4352  | 9849                                    | A        | 4648                                | 1   | 485  | SSIDTLGRRVGQPAPGSPGASNHLC<br>CESYPWQLLQPCPVQAGARAELVP<br>VPAHHPGDPVKTEP*RGGQASSGSC<br>TCWGCPTAQAQAQ\PSSPAAPMRK<br>EGPPSL*SERTGRPSRGVTSAGSDG<br>AQPGSA*HSPWPGIVLLSVRYLQETI<br>NHRPGGRPTGFSS   |
| 4353  | 9850                                    | A        | 4649                                | 1   | 623  | CDLNSQPRSTDGTFDLTVLSNDGVH<br>STVTSNIRVFFAGFSNATVDNSILLR<br>LGVPTVKDFLTNHYLHFLRIASSQL<br>TGLGTAVQLYSAYE/GEQ*NVSFGQ<br>L*SENHNQYVNPSGRSHLLLERHSK<br>RSF/FRQSGVKVESVDHDSCVHGPC<br>QNGGSCLRRLAVSSVLKSRESLPVII<br>VANEPLQPFLCKCLPGYAGSWCEID<br>IDECLPSP |
| 4354  | 9851                                    | A        | 4650                                | 1   | 446  | LMLRPRLKLQEPVPHHHLGFQCPSS PLLPP\GPPPHKVV*PLGFQEGGQHS SSLNFVAHSTPAKP/PPGCVCPSLPA SHAHCLSRVIGGVGLRNCTVVPTRG GGSQLPAWLLPSLIVPLIVHQSPVSS LQPIRHDLQPAPGDGTHSSAYC  |
| 4355  | 9852                                    | A        | 4651                                | 2   | 388  | SHGSYVMIYHDQVEFISGMKHW/FN TKIQTIIY*KNEEKNKMIISTNAENG HDKILLPFMIKTHITLGI*GNVLILIT GIHKQFFWQGQGWGGACGGGRVL LFPQAGVQWWDHSSLQPQPSLNSF SNSSL  |
| 4356  | 9853                                    | A        | 4652                                | 115   | 413  | LHIYSQPKFRKGTKKIHW*KDSVFH<br>SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS   |
| 4357  | 9854                                    | A        | 4653                                | 3   | 129  | NTLLKKTVSFHQCCWKNWISICRKI<br>KLDSYLSPYTKIKSKLIKNLKVRPET<br>MQLIQENTG/IMLQDIGFGKDYLSK<br>TSKAQATKPK*TRLLSLTIYKNQVK<br>VD  |
| 4358  | 9855                                    | A        | 4654                                | 1   | 405  | LTLKPNSGFRFPFQVATR*IKYPGIH<br>PAKEVKDLYRKT*KTLLKGITDGPN  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | Q*KTIRGSWIGRINITEMAILPKAIYR<br>FNTTPIKLPMAF\ITQLEKTIQKFIWN<br>QKGAQIAKRILSKKTNSQTSHITVL<br>QTIRI  |
| 4359  | 9856                                    | A | 4655                                | 3                       | 448  | FFFFAFLLLGLLHQIPDVSPTGKYT TLLPLMIILMISGIKEVIYIINDMADK IVKEHKTVMTR\LWDTFKWKEVKC GLNTVKALEMGELPSLQDTSPDVFI *QHSNPG*RDKCKTRQGFDREQLLY QCRDILPPRQQAFKLQSLRAQP                                     |
| 4360  | 9857                                    | A | 4656                                | 2                       | 502  | KKKKERKRKRTP\IKKWAKDDRHF TGDKIKMVNKNIKICSISLVIS*MQI KAITIHPTRLAKVKCLPRMGR\KGIL FYCWWARKLEQ/SFRKIFIP*NPGVR LLSTNPRKICAPFAKNTRASETWTK LLLAALCVVTPN*KQTNCPSTAGMS NLLASMDHTGRTVSGHA               |
| 4361  | 9858                                    | A | 4657                                | 61                      | 364  | KTVWFCARVEGQGQNLG*WKPRLP<br>GLKHFPGLSSQ/WNRKLPDGPTNPG<br>*FWNFKKKGGFPLWPKRI*IFGPGD<br>PPSRASKRAGITGITHGAGPRFNFKK<br>WR  |
| 4362  | 9859                                    | A | 4658                                | 2                       | 436  | KLIIFLYTSNEQREFEIKNTIPFTLAPP<br>KIK*LGTNLTK\WIQELYEKIYKSVM<br>KNIKELNKWRSSYGKGKSSSSSSS<br>SSSLDIACSWLRRLKIVKISGLHNLI<br>YRFNIVPIEIPETYLVDVNKLIPQFIW<br>RGKRHRIVNKIVE                          |
| 4363  | 9860                                    | A | 4659                                | 3                       | 480  | GSHDFFDKLILKFIW\NSRPRIAKTIL KKKNKVGGLTLCDFKTYYRATV*I KTVWYWD/QIRHI/DQWSRITSPEIN PYIYCQLIFNRYTKTIQ/YGNNRLFN K*C*DMRRVKSDPFLTY/PYIIIN*K MIIDVKAMIMKL/LEGNTGMSLSDF GLRKALDVTTKV                  |
| 4364  | 9861                                    | A | 4660                                | 362                     | 408  | CQVISVLWFYSSVLGWLVWIFCFSL<br>KF*/WKSKRSRQANPILKNKTRVLIL<br>PDIKTYPK\AGVIKPVW*QCS*KVW<br>GEKVWYWQKMTQIVQWDRTESPQ<br>IDN*SLTKEIQWRKDSLFNKW*GNN<br>WTAPFSS/RSLNLNKDLTAVTKIKSK<br>WVTDLNVKHKTINLL |
| 4365  | 9862                                    | A | 4661                                | 93                      | 367  | KVWGEKVWYWQKMTQIVQWDRT<br>ESPQIDN*SLTKEIQWRKDSLFNKR*<br>GNNWTAPFSS/RSLNLNKDLTAVTK<br>IKSKWVTDLNVKHKTIKLL  |
| 4366  | 9863                                    | A | 4662                                | 123                     | 397  | KVWGEKVWYWQKMTQIVQRDRA<br>ESPQIGH*SLAKEIQWRKNSLFNKW<br>*GDHWAAAFSSSSSI*TKTLQP/CTKI<br>KSKWVTDLNVKRKTIQLL  |
| 4367  | 9864                                    | A | 4663                                | 2                       | 433  | ETADFGPLVLDS/DDDSVDRDIAEAI REYLKAKSGAAQTGAGRGQPGAA QPSRAAGSGSRCKPELSHGSAPTSV CPPK\LVPGSGGGPGSQVRSSED*GS AFPVRASSNDSFEQSIKAEIEQLLNE KR*HATPKCDG\SIDKKPDP                                       |
| 4368  | 9865                                    | A | 4664                                | 94                      | 445  | HHQLTLESLGKSKNSPRLSPSLGAC   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | LSCIIWQPAKGQG\SGDGGNWQRG<br>KTAETE/SAAIGGETEWTAKCP*YSC<br>L/GVGPTALTSQPPT/PEAEHPQA/GG<br>TYRDLHPDPTWKTGWCHFVFC   |
| 4369  | 9866                                    | A | 4665                                | 52  | 119  |  |
| 4370  | 9867                                    | A | 4666                                | 987   | 1324   | VSNTPSARNQGRASSPGNSSPE/SSS<br>ESAPAATANGCDEAHLIPGGKFREP<br>LKGQRGPELGPRPRALGGPRGSI/RP<br>GSGGSFRG*LGGQMLLEPAASPGTQ<br>PSGHLPALCGLSN  |
| 4371  | 9868                                    | В | 4667                                | 3888  | 8771   | MRLWSWVLHLGLLSAALGCGLAE RPRRARRDPRAGRPPRPAAGPATCA TRGPRPPRLAAAAAAAAGRAWEAVR VPRRRQQREARGATEEPSPPSRALY FSGRGEQLRVLRADLELPRDAFTLQ VWLRAEGGQRSPAVITGLYDKCSYI SRDRGWVVGIHTISDQDNKDPRYFF SLKTDRARQVTTINAHRSYLPGQW VYLAATYDGQFMKLYVNGAQVAT SGEQVGGIFSPLTQKCKVUMLGGSA LNHNYRGYIEHFSLWKVARTQREIL SDMETHGAHTALPQLLLQENWDN VKHAWSPMKDGSSPKVEFSNAHGF LLDTSLEPPLCGQTLCDNTEVIASY NQLSSFRQPKVVRYRVVNLYEDDH KNPTVTREQVDFQHHQLAEAFKQY NISWELDVLEVSNSSLRRRLILANC DISKIGDENCDPECNHTLTGHDGGD CRHLRHPAFVKKQHNGVCDMDCN YERFNFDGGECCDPEITNVTQTCFD PDSPHRAYLDVNELKNILKLDGSTH LNIFFAKSSEELAGVATWPWDKE ALMHLGGIVLNPSFYGMPGHTHTM IHEIGHSLGLYHVFRGISEIQSCSDPC METEPSFETGDLCNDTNPAPKHKSC GDPGPGNDTCGFHSFFNTPYNNFMS YADDDCTDSFTPNQVARMHCYLDL VYQGWQPSRKPAPVALAPQVLGHT TDSVTLEWFPPIDGHFFERELGSAC HLCLEGRILVQYASNASSPMPCSPS GHWSPREAEGHPDVEQPCKSSVRT WSPNSAVNPHTVPPACPEPQGCYLE LEFLYPLVPESLTIWVTFVSTDWDS SGAVNDIKLLAVSGKNISLGPQNVF CDVPLTIRLWDVGEEVYGIQIYTLD EHLEIDAAMLTSTADTPLCLQCKPL KYKVVRDPPLQMDVASILHLNRKF VDMDLNLGSVYQYWVITISGTEESE PSPAVTYIHGRGYCGDGIIQKDQGE QCDDMNKINGDGCSLFCRQEVSFN CIDEPSRCYFHDGDGVCEEFEQKTSI KDCGVYTPQGFLDQWASNASVSHQ DQQCPGWVIIGQPAASQVCRTKVID LSEGISQHAWYPCTISYPYSQLAQT TFWLRAYFSQPMVAAAVIVHLVTD GTYYGDQKQETISVQLLDTKDQSH DLGLHVLSCRNNPLIIPVVHDLSQPF YHSQAVRVSFSSPLVAISGVALRSF |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | DNFDPVTLSSCQRGETYSPAEQSCV HFACEKTDCPELAVENASLNCSSSD RYHGAQCTVSCRTGYVLQIRRDDE LIKSQTGPSVTVTCTEGKWNKQVA CEPVDCSIPDHHQVYAASFSCPEGT TFGSQCSFQCRHPAQLKGNNSLLTC MEDGLWSFPEALCELMCLAPPPVP NADLQTARCRENKHKVGSFCKYKC KPGYHVPGSSRKSKKRAFKTQCTQ DGSWQEGACVPVTCDPPPPKFHGL YQCTNGFQFNSECRIKCEDSDASQG LGSNVIHCRKDGTWNGSFHVCQEM QGQCSVPNELNSNLKLQCPDGYAIG SECATSCLDHNSESIILPMNVTVRDI PHWLNPTRVERVVCTAGLKWYPHP ALIHCVKGCEPFMGDNYCDAINNR AFCNYDGGDCCTSTVKTKKVTPFP MSCDLQGDCACRDPQAQEHSRKDL RGYSHG* |
| 4372  | 9869                                    | A | 4668                                | 1                       | 183  | GRDGVLPCCPGWP*SPELKQSA/CL<br>GLPKCWDY/RARATAPGLLFFSYAK<br>ICPCLTSCQYSKC   |
| 4373  | 9870                                    | A | 4669                                | 3                       | 462  | TYQSFSPSHMPLRGYDVW*TTLFQN<br>P*HG*PGLQRFPLANMLCGPSGSHL<br>VLLKL*RSVTLNHREALICLPPE*YV<br>EPSGTK\CIAGWGETKGTGNDTVLN<br>VSLLNDISNQE*NNQHRGHVR*S*M<br>STDGLQASVGAL***YGGPHSWFIH<br>HRG  |
| 4374  | 9871                                    | A | 4670                                | 1                       | 360  | ARGPQRSERSSRRPAPPSRSSGS*RC<br>SCIPWPTLLLRGPR*RPL*NARYMKI<br>LASPFQLSHPRKGPRRWH/AGVLSP<br>PPAAPPPSSSSVPEAGGPPIKKQKAD<br>VTLSALNDSDAHSDVVDM   |
| 4375  | 9872                                    | A | 4671                                | 70                      | 631  | RQRPQRSERYYWRAAPPS*GDKVG PQMASQQPSASLYPYPSTSHITAGS RLGEFHELGWLEV\RWFVVDPLAC RENCETGVWAMGLSVFLSVIHSLT QRSFINTDSVLCHAQRETNVCPCAR EGPCL*PSPSARSQRPRPSPGSRTPQ EKSRPRDAAASSAPRAS*RRRPPII PLRPLWTLTSWPRAPPHGDAAAAA TREPEFHL   |
| 4376  | 9873                                    | Α | 4672                                | 93                      | 338  |   |
| 4377  | 9874                                    | A | 4673                                | 1                       | 660  | FRRFRWRRRLH*AGPASSAGGSPGE ASGTMSGELPPNINIKEPRWDQSTFI GRANHFFTVTDPRNILLTNEQLESA RKIVHDYRQGIVPPG\LTENELWRA KYIYDSAFHPDTGE\KMILIGKNGQ AQGFPWNM\TI\TGCMDGRFTGTTP AVLFWQWINQSFNAVVNYTNRSGD APLTVNELGTAYVSATTGAVATAL GLNALTKHVSPLIGPFGPFACVA  |
| 4378  | 9875                                    | A | 4674                                | 1                       | 387  | FFF*RWVSHSVAQAAVRWRNHGSL *PKTLGPK*SSH/CQSP*RAWDS*AH AHYHPA*FLNFFL*RQGPHLSM\FPK MVLNS\RPQAVPPT*ASQSDGITGVS HHTLALKV/CLFKMKYFE**TEKGI   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |    | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----|-------------------------------------|---|--|--|
| 40=0  | 06=6                                    | +- | 1.5=                                | <u> </u>  |  | HFKRTK   |
| 4379  | 9876                                    | A  | 4675                                | 3   | 383  | GQLQARPPAPAAADCPPWTLRGSA<br>LVPWLVPWRKASPQLSPGSPECP*A<br>PSARPQDPPRPAGQIQDRASEHAAR<br>GGPCGVLRADGALPALPPDRARPQ<br>VCGRGEVAARARW*RSSGRRGTKR<br>RNGE   |
| 4380  | 9877                                    | A  | 4676                                | 490   | 1013   | WASCSSSREYQCCFQTVPPGFSRVM<br>KFFTFFPGSCKHFPAPL\PAPQACTSF<br>GLAGLPPNALPLILVPAPPA/SSLAN<br>PQLVQPPV\PGLVPRPSRSRCSAA/RP<br>SA/RLARPPETPAR\PRAPSSAPRTRT<br>PS*GRARSGGSAGNAPSARRTPQGP<br>TRAACSLARILDLASGSWRVLRP |
| 4381  | 9878                                    | A  | 4677                                |   | 447  | KKFVIPDFEEFTGHVDRIFEDVKELT GGKVAAYIPQLAKSNPDLWGVSLC TVDGQRHSEGHTKIPFCLQSCVKPL TYAISISTLG/DYVHKFVGKEPSGLR YNKLSLNEEGIPHNPMVNAGAIVVS SLIKMDCNKA*KFDFVLQYLNKMA  |
| 4382  | 9879                                    | A  | 4678                                | 3   | 284  | QLGQYGETPSLLK/IKIRIQKVAGHG<br>GRHL*SQLLRSLRQKNLLNP\GGRS<br>CSEPRLRHCTPAWVTERDSVSKKK<br>KKKKEKERKKKKAGCGGSRL  |
| 4383  | 9880                                    | Α  | 4679                                | 122   | 196  | CWFENVNSKSGFWVLF*FKAKLVN   |
| 4384  | 9881                                    | A  | 4680                                | 2575  | 2786   | ADTESITL*FYHFFFFFLRL/DSVAQA<br>GVQWCDLGLLQV/LPPGFTPFSCLS<br>LPSSWDYR/RPVITPS*FFVFLVEM\G<br>FTALARMVLIS*PCDPPVSASQSAGI<br>TGVSHCAQPTFIPK  |
| 4385  | 9882                                    | A  | 4681                                | 3   | 512  | YNQKVDLFSLGIIFFEMSYHPMVTA<br>SERIFVLNQLRDPTSPKFPEDFDDGE<br>HAKQKSFISWLLNHDPAKRPTATEL<br>IKSEL\LPPPQM\EESEL\HEVL\HHTL\<br>ANV\DGEGPYRTIDGPRSFRQRISPAI<br>DYTYDQRHS*KGTSSIRA\AKLLHL<br>VRETMIRICTRHGACQT       |
| 4386  | 9883                                    | A  | 4682                                | 1   | 382  | EESILGEVGEALTSAGEELKIDRFF*I VEGLRHNSSQLNVTSMQLINALDTS PDDLDFRLHIINEFMRCGLKEILPHL *GIKNDGLDMQLKDFDEHNEEDLL ECI\HRLEDIRAELDESYDVHNMLW S  |
| 4387  | 9884                                    | A  | 4683                                | 1   | 472  | GIMLPDLK\LYDIAMVAKSAWYWH KNGHKVLWNKMAQN/HIYGQLVF VKVPKYTQWGKGSLFNEWNQE/N/ WISACRRMKLDPYV\STKINSKWIK AYTIR/PETVKLLEENIGKKLIDI/GP G**FLALAPQTQATKA*IDKWDFIK VKTFCTARETVNTEKRH                                  |
| 4388  | 9885                                    | A  | 4684                                | 182   | 345  | RFPLCSFPPTLPCEGICFPFA\FCHDC<br>KFPEAFPTRLPVEPAEL*VNSTSSLH<br>KL  |
| 4389  | 9886                                    | A  | 4685                                | 205   | 395  | VNLGIFGKNGAPPG/PEGRGGILGHR<br>NPPPRGLNK*PPLTFQGTGTPGSSSS<br>S*VNLGIFGKNGAPPGGQGGPKTPG<br>PKEWAGLAPQKGGTTGLDPLGPPK  |

| SEQ ID<br>NO: of | SEQ ID<br>NO: of |  | SEQ ID NO: | Nucleotide<br>location of | Nucleotide                      | Amino acid sequence (X=Unknown; *=Stop                                  |
|------------------|------------------|--|------------|---------------------------|---------------------------------|---|
| nucleo-tide      | peptide          |  | 09/770,160 | first codon               | location of last codon for last | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence         | sequence         | -  |            | for peptide               | amino acid of                   | ,   |
| 1                | 1                |  |            | sequence                  | peptide<br>sequence             |   |
|                  | <u> </u>         | <del>                                     </del> |            |                           | sequence                        | KGFNNHPGGIREFPGN  |
| 4390             | 9887             | A  | 4686       | 35                        | 389                             | NLFYKVLQSAGFFSMDHEDDVDFL  |
|                  |                  | -  |            |                           |                                 | ARFSQLVTGKRQSLIVSWTT*IQNG   |
|                  |                  |  |            |                           |                                 | DIKNAQEALEAAETRMALTLR*LAP   |
|                  |                  | 1  | İ          |                           | Ì                               | DDGTSSKI/LGFCCDYVQILKHL\DQ  |
| 4001             |                  | <del></del>                                      | 1.60=      | <u> </u>                  |                                 | QKAGAAAIMSVATKELMMKT  |
| 4391             | 9888             | A  | 4687       | 3                         | 547                             | GGAGRRAWAGVGGAPGAGGGPAE   |
|                  | İ                |  | ļ          |                           | i                               | AGAAAEEGAEHRGDGAVRAGAGG   |
|                  |                  | 1  |            | 1                         |                                 | GRRYRPRRVQDPGGPAE/G*TWPPS<br>PSSRCSSPCVPGRG*/PSEPQDPAAV                 |
|                  | 1                |  |            |                           |                                 | SLPTSSVPETRGPAPAGPIRG\PAPGL   |
|                  |                  | j  |            |                           |                                 | RCQP*EARPGCVYWLISGGWCSPLF   |
|                  |                  |  |            |                           |                                 | PWKLPGPRRPKQL*APRAGPCRPSL   |
|                  |                  |  |            |                           |                                 | PCRLATGHDF  |
| 4392             | 9889             | A  | 4688       | 65                        | 414                             | WKCADTNVAQGPRVQQVLQLRGT   |
|                  |                  | }  |            | }                         |                                 | PIPNHCALCLLREKQRQLCPRGSNG   |
|                  |                  |  |            |                           |                                 | P\AERSKPRRIQPEDATPAQALPRLP  |
|                  |                  | 1  |            | İ                         |                                 | KGGGPGKSPTRGKHLGWGRDLFAS  |
| 4000             |                  | <del></del>                                      |            | <u> </u>                  |                                 | LSPAKATCLPPSIDNKPF  |
| 4393             | 9890             | A  | 4689       | 75                        | 787                             | HVAFASGQRCNKSLPTPKVVPRVG  |
|                  |                  |  |            |                           |                                 | LFPRPRPPWAALVALGLAWHPLAGI   |
|                  |                  |  |            |                           |                                 | PRGCCVPHRHNAPPEGKRLPFVSPS   |
|                  |                  | 1  |            | 1                         |                                 | GHRARSTWAETRPQGPRGSLASLCP<br>AHMDLSIWKTARGATFSFQQGPPG                   |
|                  |                  |  |            |                           |                                 | SWRGQT/RGPVSPLRPARPPP*RPDK  |
|                  |                  |  |            |                           |                                 | DGGGGS\PDQRAGRTRKAEVGGCL  |
|                  |                  | 1  |            |                           |                                 | ASMRPPPAPLT*TRRGR*RRPAPAP   |
|                  |                  | 1  |            |                           |                                 | ARTAPSPRCSAPSSAAAPASAGPPP   |
|                  |                  |  |            |                           |                                 | APGAPPTP\PRPRPYALRR   |
| 4394             | 9891             | A  | 4690       | 8                         | 382                             | QEYWE*LYAYTF*NRDELDEFFDRH   |
|                  |                  |  |            |                           |                                 | ILPNFTQEEYTT*NNPVSVKEIEFVI/   |
|                  |                  | 1 1  |            | 1                         |                                 | NNISTPKKNPK*TSDPDDFTSKFC*T  |
|                  |                  |  |            |                           |                                 | FKEELIPVLYKHFQKIVEEEVLPHLF  |
| 4395             | 9892             | A  | 4691       | 2                         | 389                             | CELSITFLLKLDRRCEVRRLHR NRKRIELTRKVLFELKHMRDVQNE                         |
| 1575             | 7072             |  | 4001       | [ _                       | 309                             | HLTRFVGACTDPPNICILTEYCPRGS  |
|                  |                  |  |            | }                         |                                 | LQDILENESITLDWMFRNSLSSDIC*  |
|                  |                  |  |            |                           |                                 | GMLFIHNAA/IC*HGNLNSFNSVLIR  |
|                  |                  |  |            |                           |                                 | DLSRFN*FSFSSESPVNCIQIIVIIISP  |
| 4396             | 9893             | A  | 4692       | 2                         | 544                             | TKAPKYIKQTLIDPKGEVDYNMIIV   |
|                  | j                | 1 1  |            | ľ                         | 1                               | G/DANTPLSKTDRSSIQ*INKETVEL  |
|                  | i                |  |            | 1                         |                                 | N\HILDLIGLTAIYRTFHPTATE/YFFS  |
|                  |                  |  |            |                           |                                 | SAHGTLSRINYTLGPKPGCEKIVKH   |
|                  |                  |  |            | ĺ                         |                                 | RNYIKYPFLNTIELEINNKRN\SENT  |
|                  |                  | 1 1  |            |                           |                                 | NTWKLNNMFLKD*WINEEIKKEI*K LLETNENGNTM*QNLWDMTKAVL                       |
|                  |                  |  |            |                           |                                 | RMKFIT  |
| 4397             | 9894             | $\frac{1}{A}$                                    | 4693       |                           | 373                             | MPHSVPG\LMSPGIIPPTGLTAAAAA  |
|                  |                  | '  |            | 1                         | 3,5                             | AAAATNAAIAEAMKVKNIKLQAMS  |
|                  |                  |  |            |                           |                                 | NYHASNNQHGANSQHGDMISRVAL  |
|                  |                  |  |            |                           |                                 | DLPLSILPNLYTMPLVLQHSHPTYN   |
|                  |                  |  |            |                           |                                 | HLTYS*LHNLQTIP*INLDQRAPSLP  |
| 4398             | 9895             | A  | 4694       | 185                       | 417                             | NSELNGKEAALQ/IMILEREIGVEKA  |
|                  |                  | 1 1  |            |                           |                                 | LNVQKGRVSESLKLLANRPGMVAH  |
|                  |                  |  | i          |                           | ]                               | ACNPSTLGGQGGWV\VIRSGVRDQP   |
| 4200             | 0007             |  | 1605       | 00                        |                                 | *PHG  |
| 4399             | 9896             | A  | 4695       | 88                        | 432                             | TDLFLFVCLRLS\LLSVAQAGVQWF   |

| NO: of peptide sequence   No: of peptide seq | SEQ ID                | SEQ ID         | Me            | SEQ ID NO: | Nucleotide              | Nucleotide                      | Amino acid sequence (X=Unknown; *=Stop                 |
|--|-----------------------|----------------|---------------|------------|-------------------------|---------------------------------|--|
|  | NO: of<br>nucleo-tide | NO: of peptide | tho           | in USSN    | location of first codon | location of last codon for last | codon; /=possible nucleotide deletion; \=possible      |
|  | ouqueneo.             | Sequence       |               | <u>}</u>   |                         | peptide                         |  |
| MYSIS*PCDLPTSASQSAGITGINCR TOLTY*P*KFSVDSL   |                       |                |               | ,          |                         |                                 |  |
| 4400   9897   A   4696   3   390   YRIPYVYSTOCENLIKRPLEINPYK   RITLIKQIMNDRWINARHEEDILKPK   AEP*L\DILDQKGIYIIGGMGYSQEEI   WESLTKMKYDEITATYLLLGRKSS   HLDASDSTSSTNISLAKGRSFSTDFN   NSTG   SPRI.GLPKCWDYRHEPPHPAAFH*G   CVLFIFYFILKQEL/NSLTQAGYQW   RDLSSLQPPPGFF*SFRISLQS*D   YSCVPPRLAFCIFFW*KRGLTMLTR   LVSNS*PQ/CDPPALASQSAGITGMS   HHTQPHSIVL   LVSNS*PQ/CDPPALASQSAGITGMS   HHTQPHSIVL   HTQPHSI   |                       |                |               |            |                         |                                 | MVSIS*PCDLPTSASQSAGIT\GINCR                            |
|  | 4400                  | 9897           | A             | 4696       | 1 3                     | 390                             |  |
| WESLTKMKYDEITATYLLLGRKSS   HLDASDSTSSTNLSLAKGRPSTDFN   NSTG  |                       | ,              |               | ,,,,,      |                         |                                 | RLTLKQIMNDRWINARHEEDELKPF                              |
| HLDASDSTSSTNLSLAKGRPSTDFN  |                       |                |               |            | 1                       |                                 |  |
| 4401   9898  |                       |                |               |            |                         | }                               | HLDASDSTSSTNLSLAKGRPSTDFN                              |
| RDLSSLOPPPPGFK*FSRLSLQSS*D   | 4401                  | 9898           | $\frac{1}{A}$ | 4697       | 289                     | 365                             |  |
| YSCVPPRLAFCIFFW*KRGLTM.LTR   |                       |                |               |            |                         |                                 |  |
| LVSNS*PQ/CDPPALASQSAGITGMS   |                       |                | 1             |            | ļ                       |                                 |  |
| 4402   9899  |                       | }              |               |            | ł                       |                                 | LVSNS*PQ/CDPPALASQSAGITGMS                             |
| YFYDSHNVIQG*NMTYCT/VM*YLL   ITGSLSAHLKNMSLKRIMKSYRSGA  | 4402                  | 0800           | 1             | 1608       | 33                      | 307                             |  |
|  | 4402                  | 9099           | ^             | 4098       | 33                      | 391                             |  |
| VKTLSLPEVVIVHGSQDNNATA   |                       |                |               |            | }                       |                                 |  |
| 4403   9900  |                       |                |               |            | 1                       | ĺ                               |  |
| DTVSSTATIGYEQLALWYTQILLGR  | 4403                  | 9900           | A             | 4699       | 2                       | 371                             | LNTVIANGVAMASRPYQPTHVNVH                               |
| #E/CVILECVLILGPWTALSASRCAF WAESVEIVPRAGAIVHDKQPVKLA  4404 9901 A 4700 3 441 GFEDKVFYVWFDATIGYLSITANYT DQWERWKNPEQ/ALGAEDNYTL VSHLIATEYLNYEDGKFSKSRGVGV FGDMAQDTGIPADIWRFYLLYIRPE GQDSAFSWTDLLLKNNSELLNNLG NFINRAGMFVSKFFGGYVPEMVLTP  4405 9902 A 4701 2 375 CITRDLKWGTPVPLEGFEDKVFYV WFDATIG\YLSITANYTDQWERWW KNPEQVDLYQFMAKDNVPFHSLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPGOPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               |            |                         | <u> </u>                        |  |
| 4404 9901 A 4700 3 441 GFEDKVFYVWFDATIGYLSITANYT DQWERWKNPEQ/ALGAEDNYTL VSHLIATEYLNYEDGKFSKSRGVGV FGDMAQDTGIPADIWRFYLLYIRPE GQDSAFSWTDLLLKNNSELLNNLG NFINRAGMFVSKFFGGYVPEMVLTP GQDSAFSWTDLLLKNNSELLNNLG NFINRAGMFVSKFFGGYVPEMVLTP WFDATIGYLSITANYTDQWERWW KNPEQVDLYQFMAKDNVPFHSLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPPSPAEGRAVTNE PEEEELAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGITPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               |            |                         |                                 |  |
| DQWERWKNPEQ/ALGAEDNYTL VSHLIATEYLNYEDGKFSKSRGVGV FGDMAQDTGIPADIWRFYLLYIRPE GQDSAFSWTDLLLKNNSELLNNLG NFINRAGMFVSKFFGGYVPEMVLTP  4405 9902 A 4701 2 375 CITRDLKWGTPVPLEGFEDKVFYV WFDATIGYLSITANYTDQWERWW KNPEQVDLYQFMAKDNVPFISLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 1 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  | 4404                  | 0001           | 1.            | 4700       | 12                      | 441                             |  |
| VSHLIATEYLNYEDGKFSKSRGVGV FGDMAQDTGIPADIWRFYLLYIRPE GQDSAFSWTDLLLKNNSELLNNLG NFINRAGMFVSKFFGGYVPEMVLTP  4405 9902 A 4701 2 375 CITRDLKWGTPVPLEGFEDKVFYV WFDATIGIYLSITANYTDQWERWW KNPEQVDLYQFMAKDNVPFHSLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 1 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  | 4404                  | 9901           | A             | 4700       | 3                       | 441                             | 1  |
| GQDSAFSWTDLLLKNNSELLNNLG NFINRAGMFYSKFFGGYVPEMYLTP  4405 9902 A 4701 2 375 CITRDLKWGTPVPLEGFEDKVFYV WFDATIG\YLSITANYTDQWERWW KNPEQVDLYQFMAKDNVPFHSLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPOPSPAEGRAVTNE PEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               |            |                         |                                 | VSHLIATEYLNYEDGKFSKSRGVGV                              |
| 4405 9902 A 4701 2 375 CITRDLKWGTPVPLEGFEDKVFYV WFDATIG\YLSITANYTDQWERWW KNPEQVDLYQFMAKDNVPFHSLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPOPSPAEGRAVTNE PEEEELATLSEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            |                         | ļ                               |  |
| WFDATIG\YLSITANYTDQWERWW KNPEQVDLYQFMAKDNVPFHSLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            | <u> </u>                |                                 | NFINRAGMFVSKFFGGYVPEMVLTP                              |
| KNPEQVDLYQFMAKDNVPFHSLVF PCSALGAEDNYTLAKLLDLKKQLA VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEELATLSEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   | 4405                  | 9902           | A             | 4701       | 2                       | 375                             |  |
| VAEGNPLKPLKARRKSKRPWLIESH FNR  4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            |                         |                                 |  |
| 4406 9903 A 4702 I 3093  4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPPSPAEGRAVTNE PEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               | :          |                         |                                 |  |
| 4407 9904 A 4703 2 2717 GEMRLFVSDGVPGCLPVLAAAGRA RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            | ļ                       |                                 |  |
| RGRAEVLISTVGPEDCVVPFLTRPK VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEEELATLSEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            |                         | <del></del>                     |  |
| VPVLQVDSGNYLFSTSAICRYFFLLS GWEQDDLTNQWLEWEATELQPAL SAPLYYLVVQGKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   | 440 /                 | 9904           | A,            | 4 /03      | 2                       | 2/1/                            |  |
| SAPLYYLVVQKKGEDVLGSVRRA LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEELATLSEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               |            |                         |                                 | VPVLQVDSGNYLFSTSAICRYFFLLS                             |
| LTHIDHSLSRQNCPFLAGETESLADI VLWGAQYPLLQDPAYLPEELSALH SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEELATLSEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               | :          |                         |                                 |  |
| SWFQTLSTQEPCQRAAETVLKQQG VLALRPYLQKQPQPSPAEGRAVTNE PEEEELATLSEEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               |            |                         | j                               |  |
| VLALRPYLQKQPQPSPAEGRAVTNE PEEEELATLSEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               |            |                         | , v                             |  |
| PEEELATLSEEIAMAVTAWEKGL ESLPPLRPQQNPVLPVAGERNVLITS ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       | ]              |               |            |                         | }                               |  |
| ALPYVNNVPHLGNIIGCVLSADVFA RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       |                |               |            |                         | ļ                               | PEEEELATLSEEEIAMAVTAWEKGL                              |
| RYSRLRQWNTLYLCGTDEYGTATE TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV  |                       | j              |               |            |                         | }                               | 1  |
| TKALEEGLTPQEICDKYHIIHADIYR WFNISFDIFGRTTTPQQTKITQDIFQ QLLKRGFVLQDTVEQLRCEHCARF LADRFVEGVCPFCGYEEARGDQCD KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            |                         |                                 | 1  |
| QLLKRGFVLQDTVEQLRCEHCARF<br>LADRFVEGVCPFCGYEEARGDQCD<br>KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            |                         |                                 | TKALEEGLTPQEICDKYHIIHADIYR                             |
| LADRFVEGVCPFCGYEEARGDQCD<br>KCGKLINAVELKKPQCKVCRSCPV   |                       |                |               |            |                         |                                 | WENISEDIEGRITTPQQTKITQDIFQ<br>OLLKRGFVLODTVEOLRCEHCARE |
|  |                       |                |               |            |                         |                                 | LADRFVEGVCPFCGYEEARGDQCD                               |
|  |                       |                |               |            |                         |                                 | KCGKLINAVELKKPQCKVCRSCPV<br>VQSSQHLFLDLPKLEKRLEEWLGRT  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ 1D NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|---|--|
|   |   |   |                                     |                         |   | LPGSDWTPNAQFITRSWLRDGLKPR CITRDLKWGTPV\PLEGFEDK\VFYV WFDATIGCLS\ITANYTDQWERWW\ KNPEQVDLYQFM\AKDNVPFHSLVF PCSAL\GAEDNYTLVSHLIATEYLN YEDGK\FSKSRRVGVFGDM\AHDTG IPPDISRFYL\LYIRPEGQDSAFSWTD LLLKNNSELLNNLGNFINRAGMFVS KFFGGYVPEMVLTPDDQRLLGHVT LELQHYHQLLEKVRIRDALRSILTIS RHGNQYIQVNEPWKRIKGSEADRQ RAGTVTGLAVNIAALLSVMLQPYM PTVSATIQAQLQLPPPACSILLTNFL CTLPAGHQIGTVSPLFQKLENDQIES LRQRFGGGQAKTSPKPAVVETVTT AKPQQIQALMDEVTKQGNIVRELK AQKADKNEVAAEVAKLLDLKKQL AVAEGKPPEAPKGKKKK |
| 4408  | 9905                                    | A | 4704                                | 180                     | 490   | VENGNNSLTIMNRRARQKINKE\TA<br>DL*NTMNQMDLTDIDGTFYPKAEY<br>TFFSSKCGTF*RTDHMLGHKTS\LD<br>KFKKIKVIQNYLFNHNGVKLEINNS<br>KKMRKF  |
| 4409  | 9906                                    | A | 4705                                | 2                       | 405   | KNLNNRLFIFP*IKEEIKRQIRK*FEW NEKEKTIYQNLWDAPKAKLKEKCI VLYV\KEETSQITDLSFHLKTPEKEE HVKPKVNRRMEIIRIRAEIIAVKYRK PTETNETKSWSFENFSKIDTPLIKMI RKKKVD   |
| 4410  | 9907                                    | С | 4706                                | 217                     | 486   | MDDPRGHASPVTRTQKPQASRLLV<br>GLRAGGLSWGHKWGRGKPPRGRV<br>PAAALGAAVVAAMASPDPWAPGP<br>KQPGRWADLAALLLCGLRPA*  |
| 4411  | 9908                                    | С | 4707                                | 13                      | 216   | MLYWDCKRYKVKDKTQAWDFAG<br>NISVKGAELSQTRAASGPRRQAQVT<br>FSVWRGGLQVMAEEGRVDVC*   |
| 4412  | 9909                                    | A | 4708                                | 132                     | 1424  | VKHGPQGGPRRQAQGDIQVFGVGV LPGEWPEEGTQKGGPPLKTLGT\GD GDKIGEPPTRAP\RFRTGQPGPRDGL VGPGGELAKPWGPPRGLGPASCPP GNTPLPARPEY*HLGWVGCP*RMG QGNLGVPSK/PVFGSSGPNVGSTNC DNFGSFGLSVPMFPNGPIQRALFEG DLWDLGRTGHGTTPGGQCKPLSPG PKKLQGL*TC*SSLALQG/RLSLGAQ SGGRGKPQESESPCPNP*APPVVGC YGITRPVGFRGPSQPG/LMGRPGSSS ALWA*NPPELPNCPGL\PQPCPQEVP QSFGPPGVRGRGLKGGQDCHRGRG EGSSKCAQGGHPAPA*WNPLVYTP ASPFPFRPASGKPRS/RPSCGLRAPS* HLRRPCLTPPFRPQGLLGSSPCPQKP APDSGLLHSPLTSPRGLSGQCNPRR LHPQLNQSNRDR    |
| 4413  | 9910                                    | A | 4709                                | 1                       | 340   | RHEERTTGILTSVGLASDTSLICVIE<br>DFFDTALIISRSSSEGKIQMLDSFLLS<br>L*LLVTEETVNHLLQQEDRPCMDTL<br>DCG/LQVAISEALRRLTTSKSRDDLV   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide | Nucleotide<br>location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|---|---|---|-------------------------------------|---|---|---|
|   |   |   |                                     | sequence                                  | peptide<br>sequence   |   |
|   |   |   |                                     |   |   | HIWYDDESIV  |
| 4414  | 9911                                    | A                                       | 4710                                | 12  | 398   | TYLDLPLPGFCIYDF/VPPFSSSECFIF<br>VFMVCFFLAFILSFSSSSSPNSFFDLF   |
|   |   |   |                                     |   |   | FLALPQLPTLRGLFV*ALFQILSWVV  |
|   |   |   | ,                                   |   |   | FPVKFSLGCVFYLFFQFJFKQLAFFH<br>HV*ETFSPVFLICKYWDD*TYFS   |
| 4415  | 9912                                    | A                                       | 4711                                | 111                                       | 453   | YPFIIITFNTLGVAGNCL/KLTYTI** MPTANIILKKLKAFSLR*RTR/H/GCP   |
|   |   | ĺ                                       |                                     |   |   | QSI*ARRII*DIQIAKEDVKLYLFTDD   |
|   | 1                                       | 1                                       |                                     |   |   | MILYVENPEESTQKDLL\NKVNKVS   |
| 1416  | 0010                                    | 1                                       |                                     |   |   | GYNINMIIRCISM   |
| 4416  | 9913                                    | A                                       | 4712                                | 1   | 184   | SSRDILLCTDIASRGLDSTGVELVVN  |
|   |   |   |                                     |   |   | YDFPPTLQD\ELAARRRRSLPGLASS<br>VKEPLPQAT   |
| 4417  | 9914                                    | A                                       | 4713                                | 1   | 1630  | MALTRPVRLFSLVTRLLLAPRRGLT   |
|   |   | 1                                       |                                     |   | i   | VRSPDEPLPVVRIPVALQRQLEQRQ   |
| )   |   |   |                                     |   |   | SRRRNLPRPVLVRPGPLLVSARRPE   |
|   |   |   |                                     |   |   | LNQPARLTLGRWERAPLASQGWKS  |
|   |   |   |                                     |   |   | RRARRDHFSIERAQQEAPAVRKLSS<br>KGSFADLGLEPRVLHALQEAAPEV   |
|   | Ì                                       |   |                                     |   |   | VQPTTVQSSTIPSLLRGRHVVCAAE   |
|   |   |   |                                     |   |   | TGSGKTLSYLLPLLQRLLGQPSLDS   |
|   | :                                       |   |                                     |   |   | LPIPAPRGLVLVPSRELAQQVRAVA   |
|   |   | 1                                       |                                     | 1   |   | QPLGRSLGLLVRDLEGGHGMRRIRL<br>QLSRQPSADVLVATPGALWKALKS   |
|   |   | 1 1                                     |                                     | }   |   | RLISLEQLSFLVLDEADTLLDESFLE  |
| ļ   |   | ]                                       |                                     | }   |   | LVDYILEKSHIAEGPADLEDPFNPK   |
|   |   |   |                                     |   |   | AQLVLVGATFPE\GVGQLLNKVASP   |
|   |   | 1 1                                     |                                     | 1   |   | DAVTTITSSKLHCIMPHVKQTFLRL<br>KGADKVAELVHILKHRDRAERTGP   |
|   |   |   |                                     |   |   | SGTVLVFCNSSSTVNWLGYILDDHK   |
|   |   |   |                                     |   |   | IQHLRLQGQMPALMRVGIF\QSFQK   |
| ,   |   |   |                                     |   |   | SSRDILLCTDIAS\RGL\DSTGV\ELV   |
|   |   |   |                                     |   |   | VNY\DFPPTL\QDYIHRAG\RVG\RVG   |
|   |   | 1 1                                     |                                     |   |   | SEVPGTVISFVTHPWDVSLVQKIEP<br>AARRRSLPGLASSVKEPLPQAT   |
| 4418  | 9915                                    | A                                       | 4714                                | 79  | 410   | IVYWVEVENRDHYAAYLGWEEAP   |
|   |   |   |                                     |   |   | YSDRAYAPQEKDLGPMDIRIGLL*K   |
|   |   |   |                                     |   |   | NWIPLQDDLYPVDMLHTSVG*EMEI   |
|   |   |   |                                     |   |   | LNNCRNQGV*RMSKDRRETLETYQ<br>QL/L*LLQTSPLYLA   |
| 4419  | 9916                                    | A                                       | 4715                                | 185                                       | 449   | TTILAWGDYLSLENSRSGPN*L*LLS  |
|   |   |   |                                     |   |   | GCTVQSFGLDWNGLLK*DSLTRLP  |
| -   |   |   |                                     |   |   | ALCSLQLGRK\VETITIIYDCEGLGL  |
| 4420  | 9917                                    | 1                                       | 4716                                | 154                                       | 364   | KHLWKPAVEAYG  |
| 4420  | 791/                                    | A                                       | 4716                                | 154                                       | 364   | MWRWFSLPPPFSLAGVELAPPVSRR<br>SPRGP/TPYGLPRVPLWPLHSTALYC   |
|   |   |   |                                     |   |   | P\PSPRTSAPFTPHPLPKLRG   |
| 4421  | 9918                                    | A                                       | 4717                                | 9   | 1805  | SPATSP*ETAGPVKRSRNGSSPAADP  |
|   |   |   |                                     |   |   | EALSPPTARLQRVTVPPI*LNGQLSS  |
|   |   |   |                                     |   |   | PLHFAAGGGHAEIVQILLNHPETDR   |
| ,   |   |   |                                     |   |   | HITDQQGRSPLNICEENKQNNWEEA<br>AKLLKEAINKPIEDPLAILILFDEAR   |
| ļ   |   |   |                                     |   |   | YNLLKGFYTAPDAKLITLASLLLQI   |
|   |   |   |                                     |   |   | VYGNYESKKHKQGFLNEENLKSIVP   |
| }   |   | 1 1                                     | Ì                                   |   |   | VTKLKSKAPHWTNRILHEYKNLSTS   |
|   |   |   |                                     | j   |   | EGVSKEMHHLQRMFLQNCWEIPTY  |
|   | ·                                       | لــــــــــــــــــــــــــــــــــــــ |                                     |   |   | GAAFFTGQIFTKASPSNHKVIPVYV   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
| ]   | )                                       |   |                                     |   |  | GVNIKGLHLLNMETKDFQYFQYYV<br>D   |
| 4422  | 9919                                    | A | 4718                                | 200   | 529  | EDVSKPVPWTLNGSCTSPLISHSDN<br>QKCPPYFPVIPAMGNPENIEDAYVA<br>VIRPKNTASLNSREYRAKSYEILLHE<br>VPIEGQKKKRERKFYWKRNFKATV<br>K*HKAYWIT   |
| 4423  | 9920                                    | A | 4719                                | 177   | 321  | QTCSMDTKWQLYISPHQS**QPEMP<br>SIFSSDPSLQCVCLIICKRLLS   |
| 4424  | 9921                                    | A | 4720                                | 166   | 627  | MWRWFSLPPPFSLAGVELAPPVS/S KDTERSHPYGLPRVPLWPLHSTKW VGQSPGEGGQGPSPLSHSSFPPPRHS SPAQLPVAEKPSVAKRKPS*GFPRA PTRAPKAQVSGVGDPPAHLLFTVLP SPRTSAPFTPHPLPKLRGPRSSKALA FHSA   |
| 4425  | 9922                                    | A | 4721                                | 3   | 610  | STFNNEP*PEKQEQNKHKIRRKQIIK IRA*INKIE/TKNQCKRTMKQKVAFF QKLNKTDKPLARLRKKRQD\KIRNE KDITTDTAEIQRIIRGYYEQLYANKL ENLEEIDNS*THTTY*DLDQEEIQNL NRLITSNKVEAIIKSLPVKKSLGPDG FTAEFYQTFKEELIPILLKLF*KVEEE RVLPN*FYEASITLMPKPDKDT |
| 4426  | 9923                                    | A | 4722                                | 1   | 454  | LAHCNICLLGSSNSASVSQVAGITG<br>GCHYTQLIFLFLVEMGFHHVGQVG<br>LELPTSGDLPALASQSVGITAVSPLC<br>PTRIIFFEAESCLCWPGWSPNPGLKQ<br>SPCLGFP\KCWDYQPDLTMPS*FYL<br>LELEIKFGVHVLWKSFLIKIENYYC   |
| 4427  | 9924                                    | A | 4723                                | 1   | 318  | KEECNKEEKESREKK/NEKEKIE*KE EEVRKEEKKSLNKDKDKKRRKREK GEGRKKEEGILKVKKDGNPSNGHA RMPKER*LYDVRGTKPHSSDHGDT AIFQTCIL  |
| 4428  | 9925                                    | A | 4724                                | 42  | 200  | LICT*MLIVALLVIARNWKQIRC/SST<br>/DEWLNKLW*IPMEYY*AIEKEPTIG<br>TC   |
| 4429  | 9926                                    | A | 4725                                | 50  | 403  | VVYHMVMVLLKVVICHHFLTLFFS FRSLILYLFFILFMISLYLSCFLYNFL FIPSSSIFSIICFLMIIVLI*FFFYALFIIII FNPIILYLN\YLLSLFLIESLFDYYLCL ISFVIFY  |
| 4430  | 9927                                    | A | 4726                                | 3   | 282  | VQGQEPLTASMLVAA/PPQEQKQM<br>LGERLFPLIQTMHSNLAGKITGMLL<br>EIDNSELLHMLESPESLRSKVDEAV<br>AVLQAHHAKKEAAQKDSKAK  |
| 4431  | 9928                                    | A | 4727                                | 780   | 1249   | LVVFMSIPLCSSTHPSILQGLKLVPL<br>EQGQPPPLLFHIVRCSDIEQALNHH<br>QVLSFPQC*PTAFPGSQAPQPAVHV<br>QGQEPLTAS\ML\AGAPPQEQKQML<br>GERLFPLIQTMHSNLAGKITGMLLEI<br>DNSELLHMLESPESLRSKVSWGSDP<br>AASVLM                              |
| 4432  | 9929                                    | A | 4728                                | 510   | 2771   | NLEPSHQDRGEVQSRGEGRIVRRAF<br>CLRCCGRGSRPPPPVSVPSPSPPTPA<br>RPRRAGATCEPARARAPAPKAPLCP  |

| SEQ ID<br>NO: of<br>nucleo-tide | SEQ ID<br>NO: of<br>peptide | tho   | SEQ ID NO:<br>in USSN<br>09/770.160 | Nucleotide<br>location of<br>first codon | Nucleotide<br>location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---------------------------------|-----------------------------|-------|-------------------------------------|--|--|--|
| sequence                        | sequence                    | Jun 1 | 09/7/0,180                          | for peptide<br>sequence                  | amino acid of peptide sequence                   |  |
|                                 |                             |       |                                     |  |  | AAGPIRSPLAGLGVVGGGEMNAAA SSYPMASLYVGDLHSDVTEAMLYE KFSPAGPVLSIRVCRDMITRRSLGY AYVNFQQPADAERALDTMNFDVIK GKPIRIMWSQRDPSLRKSGVGNVFI KNLDKSIDNKALYDTFSAFGNILSC KVVCDENGSKGYAFVHFETQEAAD KAIEKMNGMLLNDRKVFVGRFKSR KEREAELGAKAKEFTNVYIKNFGEE VDDESLKELFSQFGKTLSVKVMRD PNGKSKGFGFVSYEKHEDANKAVE EMNGKEISGKIIFVGRAQKKVERQA ELKRKFEQLKQERISRYQGVNLYIK NLDDTIDDEKLRKEFSPFGSITSAKV MLEDGRSKGFGFVCFSSPEEATKAV TEMNGRIVGSKPLYVALAQRKEER KAHLTNQYMQRVAGMRALPANAI LNQFQPAAGGYFVPAVPQAQGRPP YYTPNQLAQMRPNPRWQQGGRPQ GFQGMPSAIRQSGPRPTLRHLAPTG SECPDRLAMDFGGAGAAQQGLTDS CQSGGVPTAVQNLAPRAAVAAAAP RAVAPYKYASSVAAALILPYSLCRH PS/PAVHVQG\QEPLTASMLAACNPP /QKQKQILGERLFPL\IPTMH\PNLAG K\ITGMLLEID\NSELLHMLESPESLR SK\VDEAVAVLQA\HHAQERSCPEG |
| 4433                            | 9930                        | A     | 4729                                | 7  | 365  | GRCCCCYLLDPRKTDSKAK LYTRHPPSPSCIMTACFGSHIRYRSD *VPTPVLRPAVIRSVGGGDCSERLG LRPRPI/PELGPHTPTRPPPPPWQNV QRADPVAVTPCRSREGSQAEPLPRG RGAVSSSTTRPGLPAPNRP  |
| 4434                            | 9931                        | A     | 4730                                |  | 1520   | AEGACGPRQPNKGAGAPPQGPATH LPGPRSGLSSTATMTANGTAEAVQI QFGLINCGNKYLTAEAFGFKVNAS ASSLKKKQIWTLEQPPDEAGSAAVC LRSHLGRYLAADKDGNVTCEREVP GPDCRFLIVAHDDGRWSLQSEAHR RYFGGTEDRLSCFAQTVSPAEKWS VHIAMHPQVNIYSVTRKRYAHLSA RPADEIAVDRDVPWGVDSLITLAFQ DQRYSVQTADHRFLRHDGRLVARP EPATGYTLEFRSGKVAFRDCEGRYL APSGPSGTLKAGKATKVGKDELFA LEQSCAQVVLQAANERNVSTRQGM DLSANQDE\RPTRRPSSWRSTATPKS VPSVPTRASTGR*RPPGACSPPPPAR MPAATLTSSGVTGASH*GRPMASL* PPRRMGSWPPRWRQQGTQSSSS*SS STAPSSCSAGSMASSAAARSRAPWT PTAPAMTSSSWSSTMAPTTSKTPQA NTGRWAVTPRSPAAATLLWTSSSSS ATITRWPSRWAGAT  |
| 4435                            | 9932                        | A     | 4731                                | 131                                      | 677  | PSSLS/CDIFLRSPISTPSPSPLPRTPTS TPVHVKQGTAGSVINNPYVIMDKQ PGQVIGATTPSTGSPTNKISTASQISQ GTGSPVPKIHGSSFVTSTVKVIIKQE  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         |  | PGEAPHVPATGAASQSPLPQYVTVK<br>GGHMIAVSPQKQVITPGEGIAQSAK<br>VQPSKVL/GQIG*CLPTLARADLLYS<br>VC   |
| 4436  | 9933                                    | A | 4732                                | 131                     | 362  | PSSLS/CDIFLRSPISTPSPSPLPRTPTS TPVHVKQGTAGSVINNPYVIMDKQ PGQVIGATTPSTGVY*IHICTI*RV   |
| 4437  | 9934                                    | A | 4733                                | 1                       | 4461   |  |
| 4438  | 9935                                    | A | 4734                                | 2                       | 614  | STTTERENYRPIFLMNTDGRILSIILP<br>SQI***MKKIIYHDQVGFIPGMQRWL<br>NVHK\TMHVIHHINKMKGKNYLIIS<br>ADAEKSLGKTYHCFMMKTLNKLGI<br>EGTL\NIRKGIYD*STANILLTGKN*K<br>AFPLRTGIRQGCPLSPLLFNTVWDIQ<br>AKVIRQDKQIKGIENGQEEVKLSHF<br>ADDIILYL*TEKPKDSTKKLLKWVN  |
| 4439  | 9936                                    | A | 4735                                | 164                     | 613  | NLNMEATGTDEVDKLKTKFISAWN<br>NMRYSWVLKTKTYFSRNSPVLLLG<br>KCYHFKYEDEDKTLPAESGCTIED\T<br>*LREM*KNFRKDSISRIWLTYREEFP<br>QIEGSALTTDCGWGCTLRTGQMLL<br>AQGLILHFLGRAWTWPDALNIEKLE<br>L   |
| 4440  | 9937                                    | A | 4736                                | 40                      | 359  |  |
| 4441  | 9938                                    | A | 4737                                | 4274                    | 5256   | HTLFGDKLCTVATLRETYGEMADC CAKQEPERNECFLQHKDDNPNLPR LVRPEVDVMCTAFHDNGETFLKK* VIRCL*FKIKKHGVTP*ANTL*KLP* QKYFQH*DLEVLL**FFKEVVFDTT KFYTAKNMIKDILKFIETGYNLSQK FKIDKFFNVFRRYVYMVVIIDFVLV SNIILPKFNHLCTHTHTHLTLFST YLKNDRDKTIMCKLSLIG*L\ESLEF GGSGENVDYNYFCNIVCYRK/ADCF SFLKFRYLYEIARRHPYFYAPELLFF AKRYKAAFTECCQAADKAACLLPK VLCTRIEKKSLLSNLILSILWLDLGT LSV |
| 4442  | 9939                                    | A | 4738                                | 133                     | 359  | LLNFMLLFHRYYALKVSYFKSSLDR<br>KLLELLWNKYWVNTLSSSSLLTVS/<br>DYTCKECI*ILSKLHSRLISETLFHRK  |
| 4443  | 9940                                    | A | 4739                                | 1                       | 353  | NWTL*TLKKIFSLKDAIKRIKIQSVR<br>WKKIFAKHTSDKGVES\NIYKELS*I<br>NKASSSSSSSSSSS/HSSSSSSSSSSS<br>SSSSSSSSSSSSSS  |
| 4444  | 9941                                    | A | 4740                                | 1                       | 375  | LVPKRA*YWHKNTSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS  |
| 4445  | 9942                                    | A | 4741                                | 1                       | 296  | FRRSL/DSVAQAGVQRRHLGSLQAP<br>PRGFTPFSCVSLSASWDHRSPLPRPA<br>NFFVFLVETGFHVLARMVSIS*PCD<br>RPT\SGFQSTGNTGVSHRTWPLLL   |

| SEQ ID<br>NO: of | SEQ ID   |     | SEQ ID NO: | Nucleotide<br>location of | Nucleotide<br>location of last | Amino acid sequence ( X=Unknown; *=Stop                                 |
|------------------|----------|-----|------------|---------------------------|--------------------------------|---|
| nucleo-tide      | peptide  | d   | 09/770,160 | first codon               | codon for last                 | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence         | sequence | ĺ   |            | for peptide<br>sequence   | amino acid of peptide          |   |
|                  |          |     |            | 1                         | sequence                       |   |
| 4446             | 9943     | A   | 4742       | 3                         | 380                            | FLEEYNPPKVSQEEITSSSSSSSSSSS   |
| }                | ]        |     | <u> </u>   |                           | }                              | SSSSLSSDIES/VIKNTSSNNNKKNPG   |
|                  |          |     |            |                           |                                | PDGFTAKFYQM*KDELISTLLKIISK/   |
| 1                |          |     |            |                           |                                | IFHSNSFCE*QTTR*FAISITWRAKPD<br>KDTPQKEPYRLISLINIHSC                     |
| 4447             | 9944     | A   | 4743       | 3                         | 369                            | SFTLIKKTKDIIRKANYKTMSLRKIA  |
|                  |          |     | ., .,      |                           |                                | AVILNKILAN*IEH/RIKRIIHHNQIRF  |
| <u> </u>         |          |     |            |                           |                                | I/SGTQVWLNI*K*INVTHHINRLKK  |
| ĺ                | 1        | 1   |            | Ì                         | 1                              | KNYMIILIYEEKTFDKIKHPFM/IK/V   |
|                  |          |     |            |                           | <u> </u>                       | LSKLGTENFFKLIKHIWRKI  |
| 4448             | 9945     | A   | 4744       | 70                        | 345                            | KVWGEKVWYWQKMTPIVQWDRT  |
| 1                | 1        | 1   |            |                           | ĺ                              | ESPQIGN*SLTKEIQWRKDSLFNKW   |
| ,                |          |     |            |                           | 1                              | *GNHWTAPFSS/RSLNLNKDLTAVT<br>KIKSKWVTDLNVKHKTIKLL                       |
| 4449             | 9946     | A   | 4745       | 3                         | 345                            | KFNNLDEMDKFADRQKLPYLAQEE  |
|                  |          |     | .,         |                           | 3.3                            | RQNLN/*PYLLKNLNVQNLPISKTSA  |
|                  |          |     | ı          | ĺ                         |                                | PDELICKFYETFKNEIILLLCSLFQK  |
|                  |          |     |            |                           |                                | MELSQHIHDSNLTLTQ\KI*K*YRTE  |
| 4455             |          |     |            |                           |                                | ENYRDISLINTYAK  |
| 4450             | 9947     | A   | 4746       | 35                        | 355                            | PHPPWWSLSSSPPSQHSFLPSPAYM   |
| 1                | İ        |     |            |                           |                                | PSPSGNSM/CYLSPSRGM*APSRQGP  |
|                  |          | 1 1 |            |                           |                                | SSFHQLCPKCLKGCWARHMPSK*G<br>WNGNPFPVSLNYPWARNRPSLLTH                    |
|                  |          |     |            |                           |                                | FVMWEAPRP   |
| 4451             | 9948     | C   | 4747       | 27                        | 416                            | MMKRLGMFNIQHCKKLSSWVLLM   |
|                  |          |     |            |                           |                                | KYLGNAPPSSSCLMRGNYSTWKMN  |
|                  |          |     |            |                           |                                | SPTISSPSSWENEDRRSASLHLPKLSI   |
|                  |          |     |            |                           |                                | TGTYDLKSVLGSTGASLKVFQQWG  |
|                  |          |     |            |                           |                                | AGPLPGFTEGGHPXKVFQGPCIKAV   |
| 4452             | 9949     | В   | 4748       | 5                         | 763                            | LEPFDE* MPSSVSWGILLLAGLCCLVPVSLAE                                       |
| 1152             | 7,77     |     | 4740       |                           | 703                            | DPQGDAAQKTDTSHHDQDHPTFNK  |
|                  |          |     |            |                           |                                | ITPNLAEFAFSLYRQLAHQSNSTNIF  |
|                  |          |     |            |                           |                                | FSPVSIATAFAMLSLGTKADTHDEIL  |
|                  | }        | 1 1 |            | i                         |                                | EGLNFNLTEIPEAQIHEGFQELLRTL  |
|                  |          | )   |            | ]                         |                                | NQPDSQLQLTTGNGLFLSEGLKLVD   |
|                  |          |     |            |                           |                                | KFLEDVKKLYHSEAFTVNFGDTEE  |
|                  |          |     |            |                           |                                | AKKQINANGTRPFEVKDTEEEDFPR   |
| 4453             | 9950     | A   | 4749       | 11                        | 368                            | GPGDHREGAYDEAFRHV* GLKSLIN*LLAVYPREQTTLEEVMR                            |
|                  |          |     | .,.,       | **                        | 300                            | DPWVNS/GSGVAFDN/TE*QILDHLN  |
|                  |          | 1 1 |            |                           |                                | PETTQLLVAMGFQADNLSVAVREQ  |
|                  |          |     |            |                           |                                | LFSYAMATYLDLEHTLLKKRSTIRS   |
|                  |          | 11  |            |                           |                                | QTLPPGDPTWPLYIEVCTFRLS  |
| 4454             | 9951     |     | 4750       | 175                       | 349                            | PSVAGRPRRKGGGRQPAQTRAVGI  |
|                  |          |     | •          | [                         |                                | AGTEPPLYYLGLWGPVGVDQG*QP  |
|                  |          |     |            |                           |                                | ASFPGPPQPVPKAPSNTKEA\SPSNA  |
|                  |          |     |            |                           |                                | HSSSLGRLPSSPLPPRPASNTGSLSPR<br>QGTMTTL*GATHLPQHSD*EESTRE                |
| j                |          |     |            |                           | j                              | SPPPTLEQPLPPSVQLIRMPCPPLPVT   |
|                  |          |     |            |                           |                                | Q   |
| 4455             | 9952     | A   | 4751       | 2                         | 354                            | ENCQINNLRFHLRKPKKEEYTKPTA   |
|                  |          | 1   |            | ļ                         | ł                              | SRRK*IVNIRIERNGIEQKNNRTSSSS   |
|                  |          |     |            |                           | j                              | SSSSSSSSSSSSLTFR*MDGRRSSSSS   |
|                  |          |     |            |                           | ĺ                              | SSSSSSSSQ*QRK\KTRLIKI*NERG  |
| 4456             | 9953     | A   | 4752       | 121                       | 363                            | DITADLTEIK*LLILQKLNNY   |
|                  |          |     | 7134       | 141                       | 303                            | WRDFKTKTVIRAK*GYLIITG*NHQ   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | EDTTVINMYA\PKTAPKKYMKQKL<br>TDWKRAV/DSKTTAGDLNILLLIMD<br>KTKQKINRV  |
| 4457  | 9954                                    | A | 4753                                | 178   | 439  | GPALINALLKWRIPSGEDREP*GRD<br>WEKEKE/R*LEEGRERGGKGEGGK<br>RRNKGRKEGREERGKGEREEGYIM<br>CIHGIGNRSLAVLGA  |
| 4458  | 9955                                    | A | 4754                                | 193   | 355  | GLFSIEEH*HDSTHLGINTL\LISRLFI EK*LLKRVYQVTQACELYAWNNPN DQCLPPPLVRPVQHRGAYPGEDWQ IDYTQMPPCKGFKY*LVFIDTFTVWI EAFPTKIEKAIKV   |
| 4459  | 9956                                    | A | 4755                                | 3   | 227  | NIKIGKEEVKLSLFAGDV\YLEKPKD<br>STKKLLELI/NFSKVAAY*INIQKSVA<br>FLYANSE*SEKEIRNIIPFTIAT  |
| 4460  | 9957                                    | A | 4756                                | 115   | 487  | CSLCFVAEWSPWCGWTQLIYPW*E/ ITHSPVHTQRLGLETHRTAEMRLFS FSLFFFLRQSFALVTQPGVQRCDLG LLQPPSPGFK*FSCFSLPSSWDYRHA PPRLANFVFLVQTGF\SMLATLVSN  |
| 4461  | 9958                                    | A | 4757                                | 2   | 436  | GTEAEQPSYQPGLELPQGDQEEP\G<br>LAGKTGLGPRFPRTTGGSQGTLLEV<br>EGLSHSPFQSPGIPGEFEKARKIL*A<br>GS*HNSC*ATE/GLGERPGGICGVSS<br>SVSTQGPMP*CGQQGN*ALESCRGP<br>ATAALSEQSPASPSSRAARA   |
| 4462  | 9959                                    | A | 4758                                | 76  | 194  |   |
| 4463  | 9960                                    | A | 4759                                | 310   | 551  | SSKQSSAKPPFCLPNPGKVCRSGRS<br>RT*GCNLQKGSGPEKGRRFGHPPE<br>WTIFPSVQRQGQA*FDSDSPPTNGIP<br>GEWKG  |
| 4464  | 9961                                    | A | 4760                                |   | 389  | LRWQREEGQKAGVHVGTMTQHLR PQPGAAVLPAALAPPPKHQFSLQAS SPSRLGRAGLAGGPSRAGLLC*WRR LSFLPSSFPPSPRSWGARSRRARGQ VGPREPAGRSAGDRGVGGRFGGPL ALSFFATGLLRASCAPAFQEVTVLG KAVQWRLEPGEPFTEG*ALAGTLG LGKH*QGRQGK*GWG*PSLANARQ LGKPLQVLGWLGHVEGRPGRAVK VTGVRSWSCLPGSTGVGDRSRATQ LPAGP*VSLRVDQGEAVTGWGGRA GARGSPGRQ\GEPRHSARG*GPESLP LPVTRNSLVGGLSESN*ACPCR*QK ERLSIRGVPERRPFSGPEPGRGPASC SGLPTTGGTEERRKEGKRAAAISKA ALPGWARLPDQPGPAATGSK EETLPLFADDMILYIKKKQKTKKTT |
|   |   |   |                                     |   |  | KESTKRY*N**M\NVFGKVAGYKV<br>NTQKSIN*QYTI*KVKLAS\FSSSPQK<br>NKIGINLTKEIQNVYSENYKTLKEIK<br>DLNK*ESIPCSQIRRFNIVKMTVLLK<br>LI   |
| 4466  | 9963                                    | A | 4762                                | 1   | 346  | RACL*FQLLGRLRQGDGLSLGIRGC<br>SGPGWHHHSPAWATEKDPVSKTNK<br>QNIKH/LRKSPLSRDEKILREKREEE<br>KILAYHYLEKSAIYSISFFFLTKHILN  |

| SEQ ID                  | SEQ ID              | Me            | SEQ ID NO: | Nucleotide                 | Nucleotide                      | Amino acid sequence ( X=Unknown; *=Stop                  |
|-------------------------|---------------------|---------------|------------|----------------------------|---------------------------------|--|
| NO: of                  | NO: of              |               | in USSN    | location of                | location of last                | codon; /=possible nucleotide deletion; \=possible        |
| nucleo-tide<br>sequence | peptide<br>sequence | d             | 09/770,160 | first codon<br>for peptide | codon for last<br>amino acid of | nucleotide insertion)                                    |
|                         | Sequence            |               |            | sequence                   | peptide                         |  |
|                         |                     |               |            | <u> </u>                   | sequence                        |  |
| 4467                    | 0054                | <u> </u>      |            | <u> </u>                   |                                 | TPVCWFSSEHIIYF   |
| 4467                    | 9964                | A             | 4763       | 2                          | 468                             | FPSLPSFFSRFLFCIITVM\F*VLDPLS                             |
|                         |                     | ł             | l          |                            | }                               | LSYLTLILIPHLKIEFNFEK/CVNH/CF                             |
| ĺ                       |                     |               |            |                            |                                 | LLMLLLLFLLL\CTY*MCLGPFYFLP                               |
|                         |                     |               | Ĺ          |                            |                                 | CLSFSSVFHFLSLCCIIGNLFRYIFKFI                             |
| 1                       |                     |               | l          | 1                          | ł                               | NFELC\CYVLYT*DLFYF*KFSLVIF*                              |
| 4468                    | 9965                | $+_{A}$       | 4764       | <del> </del> 3             | 364                             | IY*FFLSIMLSL*VFFHLKHFIF                                  |
| 4400                    | 9903                | A             | 4/64       | 3                          | 304                             | RNLKLISEYCKISG*KVNIENQ\VFL                               |
|                         |                     | 1             |            | }                          | }                               | YISNGQVEFEIKNTIPL*AHT*KMKY                               |
|                         |                     | -             |            | 1                          |                                 | LDINVTKYVQDPYEENYKILMKKIK<br>EQME/NIPCL*I/GRLNTKTSVLPNLE |
| ĺ                       | 1                   | 1             |            | l                          |                                 | **ITAIPIKIPASYFVDTN                                      |
| 4469                    | 9966                | $\frac{1}{A}$ | 4765       | +                          | 755                             | EESILEE\VLEALTSAGEEKKIDRFFC                              |
| ,                       | ]                   | 1"            |            | 1                          | 133                             | IVEGLRHNSVQLQVACMQLNNGLG                                 |
| 1                       |                     | 1             |            | 1                          | ł                               | TSSGELEFKLHIKNEFMPCGLKEILP                               |
|                         | 1                   |               | ļ          |                            | Į                               | NLKCLKNDGLDIQLKGFDEHKKED                                 |
|                         |                     | 1             | 1          | 1                          |                                 | LVELSHRLEDIRAELDEAYYVYNM                                 |
| ł                       | 1                   | 1             |            | 1                          | 1                               | VWSTV*ETRAEGYFISILQHLLLIRN                               |
|                         | ]                   |               |            |                            |                                 | DYFIRQQYFKLIDECVSHIVLHRDG                                |
| Ì                       |                     | 1             |            |                            |                                 | MDPDFTYRKRLNLDLTQFVDI\CVD                                |
| ļ                       | 1                   | 1             |            | }                          | }                               | QAK\LKEFEEKALELYKKFEKEFT\D                               |
|                         |                     |               |            | ļ                          |                                 | PQENSR*NCAKKEAQIYGPFNPNSK                                |
|                         |                     |               |            | <u> </u>                   |                                 | TF   |
| 4470                    | 9967                | A             | 4766       | 12                         | 321                             | KSCDWAERLVTLV/WN/PYFKNLSN                                |
|                         | <u>,</u>            |               |            | ļ                          |                                 | SYYKQLSPMGGYLNSWAHTLTEWI                                 |
|                         | 1                   |               |            |                            |                                 | IDNILDQLIFPKLQKEVG*ESWETVV                               |
|                         |                     |               |            |                            |                                 | ITNHRDLFSLWLHYLSAVKTPGINGI                               |
| 4471                    | 0060                | -             | 49.65      |                            |                                 | CQHNY  |
| 4471                    | 9968                | A             | 4767       | 2                          | 375                             | MSSPLPSPWSPCLLPGQAPGPTLPVP                               |
|                         | }                   |               |            | 1                          |                                 | PAETLSVSPACFLRLPINPSPSQ*APA                              |
|                         | ļ                   |               |            |                            |                                 | WRQLTADWGGHSALGLPGCPGPSI\                                |
|                         | {                   | 1 1           |            | 1                          |                                 | TWPSHSASHLLPQRNQGPPMLGYA<br>HLPGHLPTNVLPSGHTPALERPK      |
| 4472                    | 9969                | A             | 4768       | 3                          | 338                             | QSLALSPRLECSGAILAHCHFC/LPG                               |
| 1172                    | 3,0,                | '             | 4700       |                            | 336                             | FT*FFCLSLPSSWDYRSPPPT/RQLIF                              |
|                         |                     |               |            | į į                        |                                 | VFLVEMGFHHLGQAGLELLTL*SA                                 |
|                         |                     |               |            | ) !                        |                                 | HLGLPKCWDYRHEPPRPAQRPKLK                                 |
|                         |                     |               |            |                            |                                 | NLK*LTTVARFTI  |
| 4473                    | 9970                | A             | 4769       | 66                         | 365                             | LRDEQQHGGPWTSPLSRPPTGKRA                                 |
|                         |                     |               |            | ) ]                        |                                 | RGRSACPQLTH*PGTAARKGASPGR                                |
|                         |                     |               |            | }                          |                                 | SRALALPTRCPGPACGGREPRLQAR                                |
|                         |                     | 1 1           |            | 1                          |                                 | GVP/R*IPPRRGPHGAPSGLPPGPVG                               |
|                         |                     | $\perp$       | <u></u>    | <u> </u>                   |                                 | C  |
| 4474                    | 9971                | A             | 4770       | 3                          | 345                             | KRGTPLAGEMAEGHCL\CLPLGTEY                                |
|                         | Ī                   | 1 1           |            |                            |                                 | LTV\NPIVHLFNSEIG*K\RPVA\KVR                              |
|                         |                     |               |            | ]                          |                                 | HVYSITASIFFTPLRCLCGEKHISGLR                              |
|                         |                     |               |            |                            |                                 | ARSGIVLSLELNHGIDSFAHM*SCDL                               |
| 4457.5                  | 0075                | 1.1           |            |                            |                                 | ILII\TLLSYYI   |
| 4475                    | 9972                | A             | 4771       | 2                          | 352                             | KRGKPLAGEMEEGHCL\CLPLGTEY                                |
| ļ                       |                     |               |            |                            |                                 | LSVKP\IVHLFNSEIGEK\RPVAGG\R                              |
|                         |                     | }             |            |                            |                                 | HVYSNTASLFFTPLRCLGGEKHKSG                                |
|                         |                     |               |            |                            |                                 | LRARPGIVLSLELNHGIDSFAHM*FV                               |
| 1176                    | 0072                |               | 4770       | ļ.,                        |                                 | DLLLIITLLSYYIPFR   |
| 4476                    | 9973                | A             | 4772       | 1                          | 296                             | QRSVKISISENGNSHMEIVSFSLIFCQ                              |
|                         |                     |               |            |                            |                                 | FLLHVFCSIHIYDCYIFLLI*YPINRQ                              |
| İ                       |                     |               |            |                            | I                               | CLFAY*YSDIKFYSDIN/ISYFLCLLC                              |
|                         |                     |               |            | L                          |                                 | MSFYPLSTCIYMGLVFIF                                       |

| SEQ ID      | SEQ ID   | Me                                     | SEQ ID NO: | Nucleotide              | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop                |
|-------------|----------|--|------------|-------------------------|-----------------------|--|
| NO: of      | NO: of   | tho                                    | in USSN    | location of             | location of last      | codon; /=possible nucleotide deletion; \=possible      |
| nucleo-tide | peptide  | d                                      | 09/770,160 | first codon             | codon for last        | nucleotide insertion)                                  |
| sequence    | sequence |  | 1          | for peptide<br>sequence | amino acid of peptide |  |
|             |          |  | <u> </u>   |                         | sequence              |  |
| 4477        | 9974     | A                                      | 4773       | 2                       | 859                   | GRWPTQPTSLQGGQTLGDVREAFS                               |
| 1           |          |  | İ          |                         |                       | RRP*NGERQGAPPACPLPRSLGLWR                              |
| }           | 1        | -                                      | ļ          | }                       | }                     | P\WGPLSVTT*NRSWSCYCWLRLV/                              |
|             |          |  |            | 1                       |                       | GWKGSRAVVKALGSPEAAWHLLG                                |
| ł           | 1        |  |            | ì                       |                       | PDAALQPCHFSQPQRRCRGRPPFLP                              |
|             |          |  |            |                         | 1                     | LSGWAGPWECWPTCQAGRT*IPEG                               |
| 1           |          |  |            |                         |                       | GGGSC*GPQVNDLQRHTEENVLRC                               |
| l           | 1        |  | Į.         | 1                       | •                     | DLPHPALAAWGTVSPG/SHPAPQ*T                              |
|             |          | j                                      | ]          | ]                       | J                     | EV*RSAQSSFRPQCPLTSPARGTPGS                             |
|             | İ        | 1                                      |            |                         |                       | SRRLLCGVPP/CGPLLMLCPLPVPEV                             |
| l           | ļ        |  | 1          | ł                       | 1                     | GLGPFLRELLNTKKLNCFVNKQKV                               |
|             |          | <u>.</u>                               | <u></u>    |                         |                       | PNKPACHLGDGPSLPHQIC                                    |
| 4478        | 9975     | A                                      | 4774       | 158                     | 517                   | RCRSGYVDQVAGLFCFVLRQSLTF                               |
|             |          |  | 1          | 1                       |                       | VTQAGVQWHDLSSLQPLPPRFN*FS                              |
|             |          |  | ł          |                         |                       | CIILLSSWDYRCMPPCLANFGIFLR/E                            |
| 1           |          | 1                                      |            | 1                       | l                     | RGFTMLGMLVLNC*PQ/CDPPTSAS                              |
|             |          | <u> </u>                               |            |                         |                       | QSAGITGMGPPHLGLSCSIKK                                  |
| 4479        | 9976     | A                                      | 4775       | 1                       | 165                   | GSLLPLLFNIILEVLAKAIRQEKSIQN                            |
| 1           | 1        | 1                                      | ĺ          | i i                     | •                     | EKEKV*LSLLTDHMI/YM*NPTVKK                              |
| 1100        | 0000     | ٠                                      |            |                         |                       | LTT*KLTT   |
| 4480        | 9977     | A                                      | 4776       | 2                       | 516                   | QNPCISERQYCCEKLPLERSSRPQDS                             |
|             | ł        |  |            |                         |                       | AGQPVT/HAHCSLSSTVDLCPPLLAT                             |
| ļ           |          | 1                                      |            | ] ]                     |                       | HRISCWH*QDEVQGGRD\SVDKGD                               |
|             |          |  |            | [                       |                       | LVALSLPAGHGDTDGPISLDVPDGA                              |
| ì           |          | 1                                      |            | 1 1                     |                       | PDPQRTKAAIDHLHQKILKITEQIKI                             |
|             | j        |  |            | J J                     |                       | EQEARDDNVAEYLKLANNADKQQ                                |
| 4481        | 9978     | A                                      | 4777       | 1.54                    | 466                   | VSRIKQVVQKKNPEAAQTIGQLD                                |
| 4401        | 9978     | A                                      | 4///       | 154                     | 406                   | CTDIQGYPGSRSVAQAGVQWHNL\                               |
|             |          |  |            | ] }                     |                       | CLSLPSSWDYRRPLPRPANFLYF*ER                             |
|             |          |  |            |                         |                       | RGFTVLARMVSIS*PCDPPASASQG                              |
| 4482        | 9979     | A                                      | 4778       | 1                       | 429                   | AGITGVSHRT   |
| 1102        | 7717     | 1                                      | 7//6       | 1                       | 427                   | ARLETNSRSVAHGGVQCHDLSSQQ<br>PPPPGFKGFSGLSLPSSWDYRRPPPC |
|             | •        |  |            | 1                       |                       | PR*F*YFY*RRGFTVLARMVSIS*PC                             |
|             |          | 1 1                                    |            |                         |                       | DPPALASQSAGITGLSHCAR/LERES                             |
|             |          |  |            |                         |                       | HSIA\RAGGQWFHLGSLQPPPPRFK*                             |
|             |          |  |            | [                       |                       | FSCLSLPSSWDHRCPVD                                      |
| 4483        | 9980     | A                                      | 4779       | 1381                    | 1787                  | LEYVAHPLHQLLILNNFYSVLNEKY                              |
|             |          |  | ,          |                         | 1,0,                  | LVFFFLNMYMTFKCNLLFFLRPSL/D                             |
|             |          |  |            | ĺ                       |                       | SVTQAGVQW/RDLGSLQAL/PLPGF                              |
| }           |          | 1 1                                    |            | ļ                       |                       | APFSCLSLPISLAYSHLPPHLANFLY                             |
|             |          |  |            |                         |                       | F**RQGFTVLARMVSIS*PRDPPTSA                             |
|             |          | 1 1                                    | ĺ          | ĺ                       |                       | SQSAGITGMSH  |
| 4484        | 9981     | A                                      | 4780       | 1147                    | 1553                  | LEYVAHPLHQLLILNNFYSVLNEKY                              |
|             |          |  |            |                         |                       | LVFFFLNMYMTFKCNLLFFLRPSL/D                             |
|             |          |  |            |                         | 1                     | SVTQAGVQW/RDLGSLQAL/PLPGF                              |
|             |          | }                                      | 1          | }                       |                       | APFSCLSLPISLAYSHLPPHLANFLY                             |
|             |          |  | ĺ          |                         |                       | F**RQGFTVLARMVSIS*PRDPPTSA                             |
|             |          |  | l          |                         | 1                     | SQSAGITGMSH  |
| 4485        | 9982     | A                                      | 4781       | 1456                    | 1862                  | LEYVAHPLHQLLILNNFYSVLNEKY                              |
| {           |          |  | 1          |                         | [                     | LVFFFLNMYMTFKCNLLFFLRPSL/D                             |
|             |          |  | 1          | 1                       | }                     | SVTQAGVQW/RDLGSLQAL/PLPGF                              |
|             |          |  | ļ          |                         | 1                     | APFSCLSLPISLAYSHLPPHLANFLY                             |
| -           |          |  | Í          |                         | [                     | F**RQGFTVLARMVSIS*PRDPPTSA                             |
|             |          | 1                                      | }          |                         | •                     | SQSAGITGMSH  |
| 4486        | 9983     | A                                      | 4782       | 889                     | 1295                  | LEYVAHPLHQLLILNNFYSVLNEKY                              |
|             |          |  | _          |                         |                       | LVFFFLNMYMTFKCNLLFFLRPSL/D                             |
|             |          | ــــــــــــــــــــــــــــــــــــــ |            |                         |                       | - · · · · · · · · · · · · · · · · · · ·                |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH   |
| 4487  | 9984                                    | A | 4783                                | 743   | 1149   | LEYVAHPLHQLLILNNFYSVLNEKY<br>LVFFFLNMYMTFKCNLLFFLRPSL/D<br>SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH  |
| 4488  | 9985                                    | A | 4784                                | 2583  | 3580   | DRVSLLLPRLECNGAILAHCNLCLS GSSDSPASASQVTGITGKCHHTQLIF VFLVEMGFHHIAQAGLELLTS\DSPT LASQSAGITGVNHHAWLFFFCS/RD TVSLCYPGWSRVA*SRITATSA\PGL K*FACFSLPSSRDYRHVPPHPGNFCI FGRDEVSPCWPGWF*TPDLR\YPPA SASQSAEIIGVSHHTWPQEVFLFLNL FIYLRWSL/DSVAQARVQRRDLGSL QAPPPRFKPFSCLSLPSSWDYRRPPP HPANFFVFLVETGF\TVLARRVLIS* PRDLPASASQSAGITGVSHHTR/LIF/ NFFETGTHSVTWAAVQWYTI/GSLQ PRTPELK*SSHLILTSNWDYRCTPPC PPNLFIYLFIYFHRDEGSLCCPGWS* TPELK |
| 4489  | 9986                                    | A | 4785                                | 1966  | 2372   | LEYVAHPLHQLLILNNFYSVLNEKY<br>LVFFFLNMYMTFKCNLLFFLRPSL/D<br>SVTQAGVQW/RDLGSLQAL/PLPGF<br>APFSCLSLPISLAYSHLPPHLANFLY<br>F**RQGFTVLARMVSIS*PRDPPTSA<br>SQSAGITGMSH  |
| 4490  | 9987                                    | A | 4786                                | 3   | 305  | FFFLRKSL/GSV/TQAGVQWRGLRSL<br>QPPPPRFKRFSCLSLLSSWDYRCVPP<br>RPA/NFLYF**RWGFTTLARMVSIS*<br>PCDPPASASQSAGITGISHRAQPIKY   |
| 4491  | 9988                                    | A | 4787                                | 1172  | 1688   | VFFGVFVFVFVFVFPKLTSGTIPWA<br>SPEVMIYPPTHS*VCEAPSFPYVFSH<br>LFS\LQSPSHLVCLFLCSF*DGVSLCR<br>QAGVQWRSLGSLQPLTPWFKRFSC<br>LSLPSGWHH/RRPANFCIF/M*RRGF<br>TMLPRMVSISSPRDPPASASQSAGIT<br>GMSHRARPQSSVFKQSFLSR   |
| 4492  | 9989                                    | A | 4788                                | 641   | 1074   | VLNLVEFVTRELAFSTNVFFCFFFVF<br>FCFFLRRSL/DSVTQAGVHWLDLGS<br>LQAPPPRFTPFSCLSLPSSWDYRRPP<br>RRPANFLYF**RRGFTRLARMVSIS*<br>PCDPPASASQSAGITGVSHRARPTN<br>VNKAITNGLFTYFFFNEE   |
| 4493  | 9990                                    | A | 4789                                | 7273  | 7925   | IVSLFLFILLVFWWWCFFFFFFETE<br>SCSVAVAQAGVQWHNLGSL\QAPP<br>PGFTH/LFSCLSLPSSW\DYRRPPPRP<br>VNFFFFFHF**RRGFTML\ARMV\LIS<br>*PQVICPASASQSAGITG\LSHRVRQ<br>GPHNLLTNQVNKFFFFFLETESHS\V<br>TQAGVQ*HDLGSLQSPPPGLKRFSC<br>LSLLSS*DYRLLPPHPTHF/CVFLVE<br>NGNSPCWPGWS*TPDLR  |

| SEQ ID                  | SEQ ID              | Me  | SEQ ID NO: | Nucleotide                 | Nucleotide                      | Amino acid sequence ( X=Unknown; *=Stop  |
|-------------------------|---------------------|-----|------------|----------------------------|---------------------------------|--|
| NO: of                  | NO: of              | tho | in USSN    | location of                | location of last                | codon: /=possible nucleotide deletion: \=possible  |
| nucleo-tide<br>sequence | peptide<br>sequence | ď   | 09/770,160 | first codon<br>for peptide | codon for last<br>amino acid of | nucleotide insertion)  |
|                         | Sequence            |     |            | sequence                   | peptide                         |  |
| 4494                    | 0001                | +   | 4700       | 156                        | sequence                        | IDIOX/IDVENION/IDIOX/IDI |
| 4494                    | 9991                | A   | 4790       | 156                        | 391                             | IPHSYIRKFYSFKMAILSP/KLIYSINA   |
|                         |                     |     |            |                            |                                 | ISKKIK*AFLKKTDELILTFI*KGKES VLDKPILKKKNNIVGLKICDFETYY  |
| 4495                    | 9992                | A   | 4791       | 365                        | 506                             | GRHHACLIVDRALVFPS/CQVGRAA  |
| 1 4423                  | 9772                | ^   | 4/21       | 303                        | 300                             | HFLPLPGPCPAWTPPSRSLRPGP  |
| 4496                    | 9993                | A   | 4792       | 2                          | 503                             | LTHPAGARPVLLTTPESFEGPCFGTP   |
|                         |                     | * * |            |                            |                                 | HGQSLSQSAFSRGHSLGDTVGVTG   |
|                         |                     |     |            | ĺ                          | [                               | QVGS/LLSGGGVRAG/GAGGGGA  |
|                         |                     | 1 . |            | ,                          |                                 | GFGSRLALKAAGERGEKPREPVPPP  |
|                         |                     |     |            |                            |                                 | *QR\GPHTKAPWT*AGQGQPPGRAC  |
|                         | ]                   |     |            |                            |                                 | SPG/PPAEPASQPLTPGPGRRLPGGK   |
|                         |                     |     |            |                            |                                 | RSRRDRARGAARKMGLLFPLD  |
| 4497                    | 9994                | A   | 4793       | 3                          | 389                             | FQDLIKR*KATIIKTLWY*HKNRY/D   |
|                         |                     |     |            |                            |                                 | IDQQNRIEN/SKHRLSHLIFDKGTRTI  |
|                         |                     |     | į          | 1                          | l                               | Q/YGREQLSSSSSSSSSSSSSSSSSSS  |
|                         |                     |     |            |                            |                                 | SSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS  |
| 4498                    | 9995                |     | 4794       | 27                         | 205                             | IPDIGFHNDFLNMTPKAQATTKK  |
| 4496                    | 9993                | A   | 4794       | 21                         | 285                             | VFFFFFFLRRSLALLPRLECSGTIVF   |
|                         | [                   |     |            | [                          |                                 | LVETGF\TMLARMVSIS*PRDLPALA<br>SQSAGITGVSHRARPASFNFLTINILP  |
|                         |                     |     |            | J                          |                                 | PLLLWTF  |
| 4499                    | 9996                | A   | 4795       | 12                         | 336                             | SPVQL*F*LFLVFC*LWSWSAVVYL  |
|                         |                     | ^ - | .,,,,      |                            | 330                             | GPLGTPSADAHT/AGLSKTPPHWAA  |
|                         |                     |     |            |                            |                                 | RARLDDVFSLRTFSSHSLNMELVQD  |
|                         |                     |     |            |                            |                                 | LTASAPMYSSTSRDPP/CLGLPKCW  |
|                         |                     | _   |            | •                          |                                 | DYKREPPRPAH  |
| 4500                    | 9997                | Α   | 4796       | 74                         | 463                             | HISQHDRSYLQVLLASYKTASFLFFF   |
|                         |                     |     |            |                            |                                 | LRQSL/DSVTQAGVQWRDLGSLQA   |
|                         |                     |     |            |                            |                                 | PPPGFTPFSCPQSPK*L/SSWDYRRPP  |
|                         |                     | 1 1 |            |                            |                                 | PRPANFFCIFIVEKECFTLLARMVSIS  |
|                         |                     |     |            | İ                          |                                 | WPRDLPASASQSAGITGMSHRARP   |
| 4501                    | 9998                | A   | 4797       | 1                          | 337                             | AQVS<br>KKLISGFNVIPIKTPANPCVKIDKLIL  |
| 4501                    | 7776                |     | 4/2/       | 1                          | 331                             | KFIWHCKARRIGKAMWNKIKYGGL   |
|                         |                     |     |            |                            |                                 | IQ*DLKICHKVRIIEIVWY*LQGRQ/I  |
|                         |                     |     |            |                            |                                 | DQ/WEQ/IQSPEIDPNIYSHLTYDKSP  |
|                         |                     | 1   |            |                            |                                 | TAIQRRKIYPF  |
| 4502                    | 9999                | A   | 4798       | 3                          | 331                             | KNYKTLLREI/KEELN*WKDIPRLW  |
|                         |                     |     |            |                            |                                 | LRRLNIVKMSFL/SKFIYRLDSIPIK/  |
|                         |                     | 1 1 |            |                            |                                 | MPSRHLFL*KLILKQILKFIWEGKGP   |
|                         |                     |     |            |                            |                                 | GIAKTILKKNKFGGFTLLNFNTYNK  |
| 4500                    | 10000               | 1   |            |                            |                                 | AANSRVLVLG   |
| 4503                    | 10000               | A   | 4799       | 3                          | 340                             | INRLNIFTMAIFSTLIYRFNTIPIKIPA   |
|                         |                     |     |            |                            |                                 | GFVEMDKLILKLVWKFKAHGIGKT   |
|                         |                     |     |            | ]                          |                                 | TLKKNRVP\IPKFSSSSSSSSYWNE  |
|                         |                     |     |            |                            |                                 | DRNINQWN*IDNLKINPCVCGQLIF<br>NKDAKTNEER  |
| 4504                    | 10001               | A   | 4800       | 46                         | 195                             | SPATLGRPEVGPDS*GPGDRDHAGL  |
| ,                       |                     | ' ` | ,000       | "                          | 175                             | TMVKPPVFYLKNYWIMRSGDRDHP   |
|                         |                     |     |            |                            |                                 | G  |
| 4505                    | 10002               | c   | 4801       | 353                        | 442                             | MPLLYVQRLFARTGLCATLFGRMM   |
|                         |                     |     |            |                            |                                 | SPLYV*   |
| 4506                    | 10003               | A   | 4802       | 1                          | 273                             | FFFFFGTESRSVAQAGLRTAVARS   |
|                         |                     |     |            |                            |                                 | RLTASSASRVHAILLPQPPE*LGLQA   |
|                         |                     |     |            |                            |                                 | PATAPG*FFVFLVETGLCKHNEKSP  |
|                         |                     |     |            |                            |                                 | LSVQGRIYVLRNQKG  |
| 4507                    | 10004               | A   | 4803       | 57                         | 231                             |  |

| SEQ ID      | SEQ ID   | Me             | SEQ ID NO: | Nucleotide              | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop               |
|-------------|----------|----------------|------------|-------------------------|-----------------------|---|
| NO: of      | NO: of   | tho            | in USSN    | location of             | location of last      | codon; /=possible nucleotide deletion; \=possible     |
| nucleo-tide | peptide  | d              | 09/770,160 | first codon             | codon for last        | nucleotide insertion)                                 |
| sequence    | sequence |                |            | for peptide<br>sequence | amino acid of peptide |   |
|             | 1        | 1.             |            | sequence                | sequence              |   |
| 4508        | 10005    | A              | 4804       | 2                       | 169                   |   |
| 4509        | 10006    | A              | 4805       | 698                     | 1231                  |   |
| 4510        | 10007    | A              | 4806       | 58                      | 2674                  |   |
| 4511        | 10008    | A              | 4807       | 7                       | 235                   |   |
| 4512        | 10009    | A              | 4808       | 1                       | 245                   | FFFFFGTESRSVAQAGLRTAVARS                              |
|             |          | 1              |            |                         | {                     | RLTASSASRVHAILLPQPPE*LGLQA                            |
|             | j        | 1              | <u>l</u>   | ļ                       |                       | PATAPG*FFVFLVETGFHLVSQDGL                             |
|             | 10010    | <u> </u>       |            |                         |                       | DLLTS   |
| 4513        | 10010    | A              | 4809       | 175                     | 394                   | NFLRYSHFKKCNRRPGAVVTPVIPA                             |
|             |          |                | ļ          | 1                       |                       | LWEAEAGGS/CRSGDRDHPG*QGE                              |
| 4514        | 10011    | <del>  _</del> | 4010       |                         | 2712                  | GKRGSFLKFQEVSGAPNKFSWILPL                             |
| 4514        | 10011    | A              | 4810       | 65                      | 2712                  | SGSGHCLAEAASMGPWGWKLRWT                               |
|             |          |                | ļ          |                         |                       | VALLLAAAGTAVGDRCERNEFQCQ                              |
| ]           | }        |                | )          |                         | ļ                     | DGKCISYKWVCDGSAECQDGSDES<br>QETCLSVTCKSGDFSCGGRVNRCIP |
|             | Į        | 1              | }          |                         |                       | QFWRCDGQVDCDNGSDEQGCPPKT                              |
|             |          | 1              | [          |                         | [                     | CSQDEFRCHDGKCISRQFVCDSDRD                             |
|             | 1        | 1              | }          |                         | }                     | CLDGSNEASCPVLTCGPASFQCNSS                             |
|             |          | 1              | }          |                         |                       | TCIPQLWACDNDPDCEDGSDEWPQ                              |
|             |          |                | Į          | <b>)</b>                |                       | RCRGLYVFQGDSSPCSAFEFHCLSG                             |
|             |          |                | 1          |                         |                       | ECIHSSWRCDGGPDCKDKSDEENC                              |
|             |          | 1              | ĺ          | ĺ                       |                       | AVATCRPDEFQCSDGNCIHGSRQCD                             |
|             |          | 1              | 1          |                         | }                     | REYDCKDMSDEVGCVNETLCEGPN                              |
| ļ           |          | ł              |            |                         |                       | KFKCHSGECITLDKVCNMARDCRD                              |
| ]           |          | ]              | ļ          |                         |                       | WSDEPIKECGTNECLDNNGGCSHV                              |
|             |          |                | }          |                         |                       | CNDLKIGYECLCPDGFQLVAQRRCE                             |
|             |          |                | [          |                         |                       | DIDECQDPDTCSQLCVNLEGGYKC                              |
|             |          | ł              |            | 1                       |                       | QCEEGFQLDPHTKACKAVGSIAYLF                             |
|             |          | 1              |            |                         |                       | FTNRHEV\RRMTRTRSGYTSFIPNLR                            |
|             |          |                |            |                         |                       | NVVALNTEGPSNRIYWSDLSQRMIC                             |
|             |          |                |            |                         |                       | STQLDRAHGVSSYDTVISRDIQAPD                             |
| 1           |          |                |            | [                       |                       | GLAVDWIHSNIYWTDSVLGTVSVA                              |
| ł           |          |                |            | 1                       |                       | DTKGVKRKTLFRENGSKPRAIVVDP                             |
|             |          |                |            |                         |                       | VHGKHRPCT/WPGVLCTCQVTSAT*                             |
|             |          |                |            |                         |                       | DVRATIRR*ML/WFPQRTLEKAHLV                             |
|             |          |                |            |                         |                       | SGREKQEESIIRCLRVKVWLTYEMQ                             |
|             |          |                |            | 1                       |                       | \DLGGG*TRL*ITQAKMNAENWL*L                             |
|             |          |                |            |                         | 1                     | EEDKVFWTDIINEAIFSANRLTGSDV                            |
|             |          |                |            |                         |                       | NLLAENLLSPEDMVLFHNLTQPRG                              |
|             |          |                |            |                         |                       | VNWCERTTLSNGGCQYLCLPAPQI                              |
|             |          |                |            |                         |                       | NPHSPKFTCACPDGMLLARDMRSC                              |
|             |          |                |            | 1                       |                       | RTQHTTTRPVPDTSRLPGATPGLTT                             |
|             |          |                | 1          |                         |                       | VEIVTMSHQALGDVAGRGNEKKPS                              |
| }           | l        |                |            | ]                       |                       | SVRALSIVLPIVLLVFLCLGVFLLWK                            |
|             |          | ]              |            | ]                       |                       | NWRLKNINSINFDNPVYQKTTEDEV                             |
|             |          |                |            |                         |                       | HICHNQDGYSYPSRQMVSLEDDVA                              |
| 4515        | 10012    | A              | 4811       | 49                      | 361                   | STSYPITGSHAFL*PQNVVDAETNS*                            |
| 15          |          | '`             |            | '                       | 501                   | HINNVNLRLKIIKLLEENTEKNCHD                             |
|             |          |                |            |                         |                       | LGLSTDYY/SVTPKA*ATTTKI\DKL                            |
|             |          |                |            |                         |                       | ELIKIKNFCTSKDITYKVKRLLIGNNI                           |
|             |          |                |            |                         |                       | CK CK   |
| 4516        | 10013    | A              | 4812       | 2                       | 346                   | EKSSLFNKWCWDKWISTGKRMKL                               |
|             |          | ``             |            | -                       | 3.0                   | VPPYISSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS              |
|             |          |                |            |                         |                       | SSSTEKNCHDLGLATDYY/SVTPKA                             |
| }           |          | ]              |            |                         |                       | *ATTTKIDKLELIKIKNFCTSKDIT*K                           |
| ] [         |          |                |            | [                       |                       | VKRQLIGENSCK  |
| L           |          | اا             |            | L                       | ·,                    | _ ·X  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/7/70,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>seguence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----------|--------------------------------------|---|--|---|
| 4517  | 10014                                   | A        | 4813                                 | 2   | 356  | EKSSLFNKWCWDKWISTGKRMKL<br>VPPYISSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS   |
| 4518  | 10015                                   | A        | 4814                                 | 1   | 357  | VRPHHTNKKRVRLR/VRVNIKVRD<br>KVSTEVKDKIKNQAAVIVKLGVQIK<br>AGPWVRVKDWVRLEVKIKNRDQV<br>RGEAEVRRIGQQLRTKTRPKLNVHP<br>KRNGSIN*NIHTVECYSTIKKQ   |
| 4519  | 10016                                   | A        | 4815                                 | 1   | 323  | PVRGTEQSNKSWASGLQPGWGRAE<br>QLAWGSFNLSKWPSGGGDPQPILLS<br>RVQNMGRLAR*EAPCQPQPQLPSR<br>RSSPVPHQHL\PPCHPCGASLSPALA<br>WPPPPPSRS  |
| 4520  | 10017                                   | A .      | 4816                                 | 1908  | 2324   | ILASSLRANPGFIRNFHLFFFFFYFLR<br>RSL/DSVAQAGVQWHDLGSLQAPPP<br>GFTPFSCLSLPNSWDYRRPP/RHHAR<br>LISFFLFLVEMGF\TMLARMVSIF*P<br>WDLATSASQNAGITGVSHHTHPRP<br>VIKYLPSSSPNLAG                        |
| 4521  | 10018                                   | A        | 4817                                 | 1   | 273  | RPRRRYPHSWWFL\QEVAIFTLIEKV<br>VFYYSHRLFLHPAFYKKIRKIHHKW<br>TAPIGVISL*AHPIEHAVSNMLPVDP<br>VNLRQSIRTVLFHQ   |
| 4522  | 10019                                   | A        | 4818                                 | 3   | 293  | DHVSPGVQDQAGQYSKTP\SLQKQ<br>KQKTNRHGSAYLWSELLGSLRQED<br>HLNPGVRGCSELLLGHCSPAWAAK<br>*DPVC*KNKTKNLIAGGHPRSFWIQ   |
| 4523  | 10020                                   | A        | 4819                                 | 2   | 170  | KLGFIKIKDFSSVKDNVKGMRRQAT<br>DW/DFIKIKDFSSVKDNVKGMRRQA<br>TDWEKIFAKETSDKGLLSKIY*KPF<br>KLSKQPN  |
| 4524  | 10021                                   | A        | 4820                                 | 52  | 228  | WASGHVRPYRVLNNFISNQK\MDF<br>KEDLSGIAEMFKTPVKELLIVL*TCL<br>IVAFKSDNS   |
| 4525  | 10022                                   | Ā        | 4821                                 | 22  | 376  | TGTVIKIAWY*HKDRHMDQ*NRINS<br>SETNPNI*SKVQRPFHWRASSSSSS<br>SSSSSSSSSSSSSSSSSSSSSSSSSSSSSS  |
| 4526  | 10023                                   | A        | 4822                                 | 151   | 379  | SIPGIQSWFNIQKSINVFYHIVILNTQ<br>HRSSSSSSSSSSSSSSSY*LMIKF/LNK<br>LGIEGNFLILIKAIHGKPTVNH   |
| 4527  | 10024                                   | A        | 4823                                 | 3   | 479  | RDEVSPHCPGWSQTPGLKQSSCLGL<br>PKC*AYRHEPLGL\ILFFH*ATQETQ<br>ARAGWSYASHFVDERTEAQR/V*G<br>TCPRSHANYVLEDLICVLF*DRVCS<br>VAQAGVQWHDLSSLQPPPPGFK*FS<br>CLSLPSSWDYRRFATTAS*ILAF*VE<br>MGVRHFARLV |
| 4528  | 10025                                   | A        | 4824                                 | 1   | 57   | GKRYTRSDELQRLRRAHTG\EKKLV<br>CPECSQRSMRSDRLTGHIRSHQNKK<br>GIH*SDELQRLRRAHTG   |
| 4529  | 10026                                   | A        | 4825                                 | 3   | 602  | VDKNHTLSLLCQPSHGDCSRFSAST<br>CLIRSRFHFNFNTFKIF*KLGDSMLT<br>AVSVARDCGMILPQDKVIIAEALPP  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleofide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | KDGKVAKINWHYADSLTQCSHPSA<br>IDPEAIPVRL/CP**LRGSSNDSLSFC<br>NEWEIILSDTGGIFK/HLVPKGSNLG<br>VCVCSHECIATVF*KNLYYCFQLML<br>HGTVFARMAPDQKTQLIEALQNVE  |
| 4530  | 10027                                   | A | 4826                                | 3   | 241  | TSFSCLSLLSSWDYRCPPQAGPANF<br>CIF/M*RRGFTALARMVSVS*PRDLP<br>ASASQSAGITRVSHRTRPLV*CFN*A<br>LFR  |
| 4531  | 10028                                   | A | 4827                                | 3   | 241  | TSFSCLSLLSSWDYRCPPQAGPANF<br>CIF/M*RRGFTALARMVSVS*PRDLP<br>ASASQSAGITRVSHRTRPLV*CFN*A<br>LFR  |
| 4532  | 10029                                   | A | 4828                                | 2   | 321  | KAVLRRKFIATNT*\KK*TSQIKNLL<br>KKLQEKNKFKPKVSRRKTIQRSEQK<br>*IQTRKPGEKINKTKGSSSSSSSSSSS<br>SSSSSSQREDLNQIGNEREDITTGTT<br>EIQ   |
| 4533  | 10030                                   | A | 4829                                | 132   | 290  | LVTSE***IYQIFFFSPEMESHSVSQA<br>GVRWSNL\SSLHPLPPGFKRFSCFSL   |
| 4534  | 10031                                   | A | 4830                                | 645   | 1201   | GGRDLLRTHSVGPSTPQTIPVLTPPG *CACKTQDVPSPHS/PPMKELWPGA PQGSPGRLSPQPPH*RPSPHSPCTLW PAL/PGLASTEGWGAIALYILEKNW GREGLNLPPA*PFCPPQPSPHGSLVF PSKCASREAPTSNPCLQPQIPRLPSR PKAQPAPTHLGGAAHTRISAGVAR VCAGAFGGQA   |
| 4535  | 10032                                   | A | 4832                                | 115   | 454  | TMMTSWINCFRKG*DDVEHHALHI NLRGKKFILFLPIQEGLTRGRKQ*AN TVGHFQLGFRLYKISGLEKLKLSKL STQWLLKP\LHPDQL*TRAELLG*ES LDKYDQDPEALIR  |
| 4536  | 10033                                   | A | 4833                                | 1   | 638  | ERQSVPGFKASQDRLTLLVRAYTN Q*LKLRPLLIF\HFENPRALKNCAYS TLSVLCQWNNKAWMSAH\LFTGW LTKYFKLTIETYCSE\KTTPFKILLFI DNLAGHPRALMEM*KEMNVFMPA KTTSIMLPLI\SSFNSYYLRNRIHRTF VVVAQSWLQCPTTAISDIQIGPVAM GLLLIPSAFVLCWLSIQQVSKLKHF HSHHSYFLRFWRLTA   |
| 4537  | 10034                                   | A | 4834                                | 2   | 6053   | KEILQEYLEISSLVQDEVVAIHREM AAAAARIQPEAEYQGFLRQYGSAP DVPPCVTFDESLLEEGEPLEPGELQL NELTVESVQHTVQLLGKRQVLQEA LQGLQVALCSQAKLQAQQELLQTK LEHLGPGEPPPVLLLQDDRHSTSSSE QEREGGRTPTLEILKSHISGIFRPKFS LPPPLQLIPEVQKPLHEQLWYHGAIP RAEVAELLVHSGDFLVRESQGKQE YVLSVLWDGLPRHFIIQSLDGSRPL RMEAADPGSPALQNLYRLEGEGFPS IPLLIDHLLSTQQPLTKKSGVVLHRA VPKDKWVLNHEDLVLGEQIGRVPQ RGSNSQRAWVRGPNTGAPHPGVGS RMGRKRRRELRDWEGRGRSPRPFQ GNFGEVFSGRLRADNTLVAVKSCR |

| SEQ ID<br>NO: of | SEQ ID<br>NO: of | 1   | SEQ ID NO:<br>in USSN | Nucleotide<br>location of |                                    | Amino acid sequence (X=Unknown; *=Stop                                  |
|------------------|------------------|-----|-----------------------|---------------------------|------------------------------------|---|
| nucleo-tide      | peptide          | d   | m USSN<br>09/770,160  | f _                       | location of last<br>codon for last | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence         | sequence         |     | 1                     |                           | amino acid of                      |   |
| Ì                | ļ                |     | }                     | sequence                  | peptide<br>sequence                |   |
|                  | <del> </del>     | ļ — |                       |                           |                                    | ETLPPDLKAKFLQEARILKQYSHPNI  |
| 1                |                  |     | !                     | ]                         |                                    | VRLIGVCTQKQPIYIVMELVQGGDF   |
|                  |                  |     |                       |                           |                                    | LTFLRTEGARLRVKTLLQMVGDAA  |
|                  | [                | 1   |                       |                           |                                    | AGMEYLESKCCIHRDLAARNCLVT  |
|                  | ĺ                |     |                       |                           |                                    | EKNVLKISDFGMSREEADGVYAAS  |
| 1                |                  |     |                       |                           | }                                  | GGLRQVPVKWTAPEALNYGRYSSE<br>SDVWSFGILLWETFSLGASPYPNLS                   |
|                  |                  |     |                       |                           |                                    | NQQTREFVEKGGRLPCPELCPDAVF   |
| 1                |                  | 1   |                       | }                         |                                    | RLMEQCWAYEPGQRPSFSTIYQELQ   |
|                  | 1                |     |                       |                           |                                    | SIRKRHRPRCSSSAAPAHMLTALHS   |
| ]                | ļ                |     |                       |                           |                                    | PGLLPPASTLPAGCSAVSSLCPCCCQ  |
|                  |                  |     |                       |                           |                                    | GFLFRAETIKPLVPTEHSWHVHSSG   |
|                  |                  |     |                       |                           |                                    | RQVSEGTSAGNIEQARKGKGLEEC  |
|                  | 1                |     |                       |                           |                                    | AVPTGGSTPLPEGRNDRDLRLPGPE   |
|                  |                  |     |                       |                           |                                    | PASEAGGPARGRRTERSGCPGAQL<br>GPRQRPPEQGATGERAPAFACVAA                    |
|                  |                  |     |                       |                           |                                    | CTRAAVPGRVCVEASMKLKKQVT   |
|                  |                  |     |                       |                           |                                    | VCGAAIFCVAVFSLYLMLDRVQHD  |
|                  |                  |     |                       |                           |                                    | PTRHQNGGNFPRSQISVLQNRIEQLE  |
|                  |                  |     |                       |                           |                                    | QLLEENHEIISHIKDSVLELTANAEG  |
|                  |                  | i   |                       |                           |                                    | PPAMLPYYTVNGSWVVPPEPRPSFF   |
|                  |                  |     |                       |                           |                                    | SISPQDCQFALGGRGQKPELQMLTV   |
|                  |                  |     |                       |                           | :                                  | SEELPFDNVDGGVWRQGFDISYDP<br>HDWDAEDLQVFVVPHSHNDPGWI                     |
|                  |                  |     |                       |                           |                                    | KTFDKYYTEQTQHILNSMVSKLQE  |
| ] .              |                  |     |                       |                           |                                    | DPRRRFLWAEVSFFAKWLVGNGQL  |
|                  |                  | }   |                       |                           |                                    | EIATGGWVMPDEANSHYFALIDQLI   |
| ļ                |                  |     |                       |                           |                                    | EGHQWLERNLGATPRSGWAVDPFG  |
|                  |                  |     | ľ                     |                           |                                    | YSSTMPYLLRRANLTSMLIQRVHY  |
|                  |                  |     |                       |                           |                                    | AIKKHFAATHSLEFMWRQTWDSDS  |
|                  |                  |     |                       |                           | ì                                  | STDIFCHMMPFYSYDVPHTCGPDPK<br>ICCQFDFKRLPGGRINCPWKVPPRAI                 |
|                  |                  |     |                       | l                         | ļ                                  | TEANVAERAALLLDQYRKKSQLFR  |
|                  |                  |     | ļ                     | }                         | j                                  | SNVLLVPLGDDFRYDKPQEWDAQF  |
|                  |                  |     |                       |                           |                                    | FNYQRLFDFFNSRPNLHVQAQFGTL   |
|                  | [                |     | ĺ                     | 1                         |                                    | SDYFDALYKRTGVEPGARPPGFPVL   |
|                  | Í                |     | Ì                     | İ                         |                                    | SGDFFSYADREDHYWTGYYTSRPF  |
|                  |                  |     |                       |                           |                                    | YKSLDRVLEAHLRGAEVLYSLAAA  |
|                  |                  |     |                       | į                         |                                    | HARRSGLAGRYPLSDFTLLTEARRT<br>LGLFQHHDAITGTAKEAVVVDYGV                   |
|                  |                  |     |                       | ļ                         |                                    | RLLRSLVNLKQVIIHAAHYLVLGDK   |
|                  |                  | Ì   |                       |                           |                                    | ETYHFDPEAPFLQVVGWEEAEPMM  |
|                  |                  |     |                       | ]                         |                                    | VLPFRLTEFQDDTRLSHDALPERTVI  |
|                  |                  |     |                       |                           |                                    | QLDSSPRFVVLFNPLEQERFSMVFL   |
|                  |                  | - 1 |                       | Í                         |                                    | LVNSPRVRVLSEEGQPLAVQISAHW   |
|                  |                  |     |                       |                           | 1                                  | SSATEAVPDVYQVSVPVRLPALGLG   |
|                  |                  |     |                       |                           | ł                                  | VLQLQLGLDGHRTLPSSVRIYLHGR   |
|                  |                  | -   |                       |                           | 1                                  | QLSVSRHEAFPLRVIDSGTSDFALSN   RYMQVWFSGLTGLLKSIRRVDEEH                   |
|                  | ]                | -   |                       |                           | ļ                                  | EQQVDMQVLVYGTRTSKDKSGAY   |
|                  |                  |     |                       |                           | 1                                  | LFLPDGEA\SPTSPRSPPCCVSLKALS   |
| [                | 1                |     | 1                     |                           | [                                  | SQRWFRTMSTFTRRSGFTICQGWR  |
| Í                |                  |     | ĺ                     |                           |                                    | GCLWTYHPWWTSGTTSTRSWPCTS  |
| }                |                  |     |                       |                           | 1                                  | IQTSTAR/VIFFTDLNGFQVQPRRYL  |
|                  | 1                |     |                       |                           | ł                                  | KKLPLQANFYPMPVMAYIQDAQKR  |
|                  | ļ                |     |                       |                           | 1                                  | LTLHTAQALGVSSLKDGQLEVILDR RLMQDDNRGLGQGLKDNKRTCNR                       |
|                  | ļ                |     |                       |                           | j                                  | FRLLLERRTVGSEPDFFSKLAAMFR   |
|                  |                  |     |                       |                           |                                    | THEFT A COPL DILLOY TWEEK   |

| SEQ ID<br>NO: of        | SEQ ID<br>NO: of    |          | SEQ ID NO: | Nucleotide<br>location of | Nucleotide<br>location of last  | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible |
|-------------------------|---------------------|----------|------------|---------------------------|---------------------------------|--|
| nucleo-tide<br>sequence | peptide<br>sequence | d        | 09/770,160 | first codon               | codon for last<br>amino acid of | nucleotide insertion)  |
| sequence                | sequence            |          |            | sequence                  | peptide                         |  |
|                         |                     | -        |            |                           | sequence                        | GLIFHSSRSGNREVQDSHSTSYPSLL   |
| 1                       |                     |          | }          |                           |                                 | SHLTSMYLNAPALALPVARMQLPG   |
|                         | ļ                   |          | <u> </u>   |                           |                                 | PGLRSFHPLASSLPCDFHLLNLRTLQ   |
|                         |                     |          |            |                           |                                 | AEHCLWAEALLHLRSLKALRPLPW<br>ALSVIQEDTLPSAETALILHRKGFDC                                   |
|                         |                     |          |            | }                         |                                 | GLEAKNLGFNCTTSQGKVALGSLF   |
|                         |                     |          |            | }                         |                                 | HGLDVVFLQPTSLTLLYPLASPSNST   |
|                         |                     | <u> </u> |            | <u> </u>                  |                                 | DVYLEPMEIATFRLRLG  |
| 4538                    | 10035               | A        | 4835       | 1                         | 6606                            | MGFSSELCSPQGHGVLQQMQEAEL   |
|                         |                     |          |            |                           |                                 | RLLEGMRKWMAQRVKSDREYAGL<br>LHHMSLQDSGGQSRAISPDSPISQS                                     |
|                         |                     |          |            |                           | [                               | WAEITIQTEGLSRLLRQHAEDLNSG  |
|                         |                     |          |            | 1                         | 1                               | PLSKLSLLIRERQQLRKTYSEQWQQ  |
|                         |                     |          |            |                           |                                 | LQQELTKTHSQDIEKLKSQYRALAR  |
|                         |                     |          | ļ          |                           |                                 | DSAQAKRKYQEASKDKDRDKAKD  |
| 1                       |                     |          |            | 1                         |                                 | KYVRSLWKLFAHHNRYVLGVRAA<br>QLHHQHHHQLLLPGLLRSLQDLHE                                      |
| 1                       |                     |          |            | 1                         |                                 | EMACILKEILQEYLEISSLVQDEVVA   |
|                         |                     |          | 1          |                           |                                 | IHREMAAAAARIQPEAEYQGFLRQ   |
|                         |                     |          |            |                           |                                 | YGSAPDVPPCVTFDESLLEEGEPLEP   |
|                         | •                   |          |            |                           | }                               | GELQLNELTVESVQHTLTSVTDELA  |
|                         | •                   |          |            |                           |                                 | VATEMVFRRQEMVTQLQQELRNEE<br>ENTHPRERVQLLGKRQVLQEALQG                                     |
|                         |                     |          |            | }                         |                                 | LQVALCSQAKLQAQQELLQTKLEH   |
|                         | ,                   |          |            |                           |                                 | LGPGEPPPVLLLQDDRHSTSSSEQER   |
|                         |                     |          |            |                           |                                 | EGGRTPTLEILKSHISGIFRPKFSLPP  |
| j                       | 1                   |          |            |                           |                                 | PLQLIPEVQKPLHEQLWYHGAIPRA<br>EVAELLVHSGDFLVRESQGKQEYV                                    |
|                         |                     |          |            |                           |                                 | LSVLWDGLPRHFIIQSLDGSRPLRM  |
|                         |                     |          |            | [                         | •                               | EAADPGSPALQNLYRLEGEGFPSIPL   |
|                         |                     |          |            |                           |                                 | LIDHLLSTQQPLTKKSGVVLHRAVP  |
|                         | }                   |          |            | {                         |                                 | KDKWVLNHEDLVLGEQIGRVPQRG   |
|                         |                     |          |            |                           |                                 | SNSQRAWVRGPNTGAPHPGVGSRM<br>GRKRRRELRDWEGRGRSPRPFQGN                                     |
|                         |                     |          |            |                           |                                 | FGEVFSGRLRADNTLVAVKSCRETL  |
|                         |                     |          |            | }                         | 1                               | PPDLKAKFLQEARILKQYSHPNIVR  |
|                         |                     |          |            |                           | !                               | LIGVCTQKQPIYIVMELVQGGDFLT  |
|                         |                     |          |            |                           |                                 | FLRTEGARLRVKTLLQMVGDAAAG   |
|                         |                     |          |            | ]                         |                                 | MEYLESKCCIHRDLAARNCLVTEK<br>NVLKISDFGMSREEADGVYAASGG                                     |
|                         |                     |          |            |                           |                                 | LRQVPVKWTAPEALNYGRYSSESD   |
|                         |                     |          |            |                           |                                 | VWSFGILLWETFSLGASPYPNLSNQ  |
|                         |                     |          |            |                           |                                 | QTREFVEKGGRLPCPELCPDAVFRL  |
|                         |                     |          |            |                           |                                 | MEQCWAYEPGQRPSFSTIYQELQSI<br>RKRHRKHRAGTERKGTRGMRCTD                                     |
| ]                       |                     |          |            |                           |                                 | RRQHPFARGAQRQRPKATWAGAG  |
|                         |                     |          |            |                           |                                 | FRGWRTRAEPAQRSAPAARGPAGE   |
|                         |                     |          |            |                           |                                 | LQQRAEQGATGGRAPAFACVAACT   |
|                         |                     |          |            |                           |                                 | RAAVPGRVCVEASMKLKKQVTVC  |
|                         |                     |          |            |                           |                                 | GAAIFCVAVFSLYLMLDRVQHDPT<br>RHQNGGNFPRSQISVLQNRIEQLEQ                                    |
| 1                       |                     |          |            | ĺ                         |                                 | LLEENHEIISHIKDSVLELTANAEGP   |
|                         |                     |          |            |                           |                                 | PAMLPYYTVNGSWVVPPEPRPSFFS  |
|                         |                     |          |            |                           |                                 | ISPQDCQFALGGRGQKPELQMLTVS  |
|                         |                     |          |            |                           |                                 | EELPFDNVDGGVWRQGFDISYDPH   |
|                         |                     |          |            |                           |                                 | DWDAEDLQVFVVPHSHNDPGWIKT FDKYYTEQTQHILNSMVSKLQEDPR                                       |
|                         |                     |          |            |                           |                                 | RRFLWAEVSFFAKWLVGNGQLEIA   |
| L                       |                     | لــــا   | ·          | L                         |                                 |  |

| SEQ ID      | SEQ ID   | Me        | SEQ ID NO: | Nucleotide   | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop              |
|-------------|----------|-----------|------------|--------------|---------------------|--|
| NO: of      | NO: of   |           | in USSN    | location of  | location of last    | codon; /=possible nucleotide deletion; \=possible    |
| nucleo-tide | peptide  | đ         | 09/770,160 | first codon  | codon for last      | nucleotide insertion)                                |
| sequence    | sequence | 1         |            | 1            | amino acid of       |  |
| ĺ           |          | ĺ         | {          | sequence     | peptide<br>sequence |  |
|             |          | †         |            | <del> </del> |                     | TGGWVMPDEANSHYFALIDQLIEG                             |
| 1           | Ì        | 1         | {          | ł            |                     | HQWLERNLGATPRSGWAVDPFGYS                             |
| ļ           | ļ        |           | •          | 1            | Į                   | STMPYLLRRANLTSMLIQRVHYAIK                            |
| J           | ]        |           | }          | ļ            |                     | KHFAATHSLEFMWRQTWDSDSSTD                             |
|             |          |           |            |              |                     | IFCHMMPFYSYDVPHTCGPDPKICC                            |
| l           | ĺ        | 1         |            |              | ĺ                   | QFDFKRLPGGRINCPWKVPPRAITE                            |
|             | ł        | 1         |            | ł            |                     | ANVAERAALLLDQYRKKSRLFRSN                             |
| 1           | 1        |           |            | 1            |                     | VLLVPLGDDFRYDKPQEWDAQFFN                             |
| 1           |          |           |            |              | ļ                   | YQRLFDFFNSRPNLHVQAQFGTLSD                            |
| ļ           |          |           |            |              |                     | YFDALYKRTGVEPGARPPGFPVLSG                            |
| ĺ           | ĺ        |           |            | ļ            |                     | DFFSYADREDHYWTGYYTSRPFYK                             |
| ļ           | }        |           |            | 1            |                     | SLDRVLEAHLRGAEVLYSLAAAHA                             |
| 1           | ļ        |           |            |              |                     | RRSGLAGRYPLSDFTLLTEARRTLG                            |
|             | }        | ļ         |            | j            |                     | LFQHHDAITGTAKEAVVVDYGVRL                             |
|             |          | 1         |            |              |                     | LRSLVNLKQVIIHAAHYLVLGDKET                            |
| 1           | ĺ        |           |            | 1            |                     | YHFDPEAPFLQVVGWEEAEPMMVL                             |
|             | [        |           |            |              |                     | PFRLTEFQDDTRLSHDALPERTVIQL                           |
| 1           | ]        |           | 1          |              |                     | DSSPRFVVLFNPLEQERFSMVFLLV                            |
| }           |          |           |            |              |                     | NSPRVRVLSEEGQPLAVQISAHWSS                            |
| 1           | ĺ        |           |            |              |                     | ATEAVPDVYQVSVPVRLPALGLGV                             |
|             |          |           |            |              |                     | LQLQLGLDGHRTLPSSVRIYLHGRQ                            |
|             | Į        |           |            |              |                     | LSVSRHEAFPLRVIDSGTSDFALSNR                           |
| }           |          |           |            |              |                     | YMQVWFSGLTGLLKSIRRVDEEHE                             |
| ļ           | ļ        | Į,        |            | 1            |                     | QQVDMQVLVYGTRTSKDKSGAYL                              |
| •           | •        |           |            | <u>}</u>     |                     | FLPDGEA\SPTSPRSPPCCVSLKALSS                          |
| ļ           |          |           |            |              |                     | QRWLRTMSTFTRRSGFTICQGWRG                             |
| ì           |          | }         |            |              |                     | CLWTYHPWWTSGTTSTRSWPCTSI                             |
| 1           |          |           |            | }            |                     | QTSTAR/VIFFTDLNGFQVQPRRYLK                           |
| }           |          |           |            |              |                     | KLPLQANFYPMPVMAYIQDAQKRL                             |
|             |          |           |            | j            |                     | TLHTAQALGVSSLKDGQLEVILDRR                            |
|             |          |           |            |              |                     | LMQDDNRGLGQGLKDNKRTCNRF                              |
|             |          |           |            |              |                     | RLLLERRTVGSEPDFFSKLAAMFRG                            |
|             |          |           |            | l i          |                     | LIFHSSRSGNREVQDSHSTSYPSLLS                           |
| <b>j</b>    |          |           |            |              |                     | HLTSMYLNAPALALPVARMQLPGP                             |
|             |          |           |            | ]            |                     | GLRSFHPLASSLPCDFHLLNLRTLQ                            |
|             |          | ļ         |            |              |                     | AEHCLWAEALLHLRSLKALRPLPW                             |
|             |          |           |            | [ [          |                     | ALSVIQEDTLPSAETALILHRKGFDC                           |
| 1           |          |           |            | i            | ·                   | GLEAKNLGFNCTTSQGKVALGSLF                             |
|             |          |           |            |              |                     | HGLDVVFLQPTSLTLLYPLASPSNST                           |
| 4539        | 10036    | -         | 1926       | 114          | 255                 | DVYLEPMEIATFRLRLG                                    |
| 4007        | 10030    | В         | 4836       | 114          | 255                 | VQPRRYLKKLPLQANFYPMPVMAY                             |
| 4540        | 10037    |           | 1937       |              | 452                 | IQDAQKRLTLHTAQALGVSSLKDX*                            |
| 7,740       | 1005/    | A         | 4837       | 1            | 452                 | LDGRQLSV/SRHEG/FP/LRCIDS/GTS                         |
|             |          |           |            |              | İ                   | ELALS/N/RYMQVWFSGL/TGLLKSI                           |
|             |          |           |            |              |                     | RRVDERHEQQVHMQVLVYGTRTS<br>KDKSGAYLFMPDGEAKP\TSPRSPP |
|             |          | ] ]       |            | ,            |                     |  |
|             |          |           |            |              |                     | CCVSLKALSSQRWLRTMSTFTRRSG                            |
|             |          | [ [       |            |              |                     | FTICQGWRGCLWTYHPWWTSGTTS                             |
| 4541        | 10038    | A         | 4838       | 3            | 3543                | TRSLHFSFN OLGELGEERGGRALTYGVEASAK                    |
| エンチド        | 10020    | ^         | 4020       | ا            | 3 <b>343</b>        | QLGRLGPERRGGRALTVCVEASMK                             |
|             |          |           |            | ]            | ]                   | LKKQVTVCGAAIFCVAVFSLYLML                             |
|             |          |           |            |              |                     | DRVQHDPTRHQNGGNFPRSQISVLQ                            |
|             |          |           |            |              |                     | NRIEQLEQLLEENHEIISHIKDSVLEL                          |
|             |          |           |            | 1            |                     | TANAEGPPAMLPYYTVNGSWVVPP                             |
|             |          |           | Ì          | 1            | ]                   | EPRPSFFSISPQDCQFALGGRGQKPE                           |
| ļ           |          |           | J          |              | ]                   | LQMLTVSEELPFDNVDGGVWRQGF                             |
|             |          |           |            |              |                     | DISYDPHDWDAEDLQVFVVPHSHN                             |
|             |          | $\coprod$ |            |              |                     | DPGWIKTFDKYYTEQTQHILNSMVS                            |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |     | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|---|---|-----|-------------------------------------|----------------------------|--|---|
|   | ĺ                                       |     | 1                                   | sequence                   | sequence   |   |
|   |   | 1   |                                     |                            |  | KLQEDPRRRFLWAEVSFFAKWWD   |
| ļ   |   | j   | }                                   |                            | ]  | NINVQKRAAVRRLVGNGQLEIATG  |
|   |   |     |                                     |                            |  | GWVMPDEANSHYFALIDQLIEGHQ  |
| ł   |   | 1   | Ì                                   |                            |  | WLERNLGATPRSGWAVDPFGYSST  |
| ļ   |   | 1   |                                     |                            |  | MPYLLRRANLTSMLIQRVHYAIKK  |
|   |   |     |                                     |                            | İ  | HFAATHSLEFMWRQTWDSDSSTDI  |
|   | <u> </u>                                |     | 1                                   |                            |  | FCHMMPFYSYDVPHTCGPDPKICC  |
| Į.  | ļ                                       | ]   | ļ                                   | į                          |  | QFDFKRLPGGRINCPWKVPPRAITE   |
|   |   |     | 1                                   |                            |  | ANVAERAALLLDQYRKKSQLFRSN  |
| (   |   |     |                                     | i                          |  | VLLVPLGDDFRYDKPQEWDAQFFN  |
| 1   | ŀ                                       | 1   |                                     | }                          |  | YQRLFDFFNSRPNLHVQAQFGTLSD   |
|   |   |     |                                     |                            |  | YFDALYKRTGVEPGARPPGFPVLSG   |
| [   |   |     |                                     |                            |  | DFFSYADREDHYWTGYYTSRPFYK  |
| }   |   |     |                                     | }                          |  | SLDRVLEAHLRGAEVLYSLAAAHA  |
| <u> </u>                                    |   |     |                                     |                            | ļ  | RRSGLAGRYPLSDFTLLTEARRTLG   |
|   |   |     |                                     |                            |  | LFQHHDAITGTAKEAVVVDYGVRL  |
|   | 1                                       | 1   |                                     | 1                          |  | LRSLVNLKQVIIHAAHYLVLGDKET   |
|   | ]                                       |     |                                     |                            |  | YHFDPEAPFLQVDDTRLSHDALPER   |
|   |   |     |                                     | 1                          |  | TVIQLDSSPRFVVLFNPLEQERFSMV  |
| 1   |   | 1   |                                     |                            |  | SLLVNSPRVRVLSEEGQPLAVQISA   |
| }   |   |     |                                     | 1                          |  | HWSSATEAVPDVYQVSVPVRLPAL  |
|   |   |     |                                     | <u>'</u>                   |  | GLGVLQLQLGLDGHRTLPSSVRIYL   |
| (   |   |     |                                     |                            |  | HGRQLSVSRHEAFPLRVIDSGTSDF<br>ALSNRYMQVWFSGLTGLLKGSGLC   |
|   |   | 1   |                                     |                            |  | FLA\SIRRVDEEHEQQVDMQVLVYG   |
|   |   |     |                                     |                            |  | TRTSKDKSGAYLFLPDGEA\SPTSPR  |
|   |   | 1 1 |                                     |                            |  | SPPSCVSLKALSSQRWLRTMSTFTR   |
|   |   |     |                                     | }                          |  | RSGFTICQGWRGCLWTYHPWWTS   |
|   |   |     |                                     |                            |  | GTTSTRSWPCTSIQTSTAR/VIFFTDL   |
|   |   | 1   |                                     |                            |  | NGFQVQPRRYLKKLPLQANFYPMP  |
|   |   | 1 1 |                                     | 1                          |  | VMAYIQDAQKRLTLHTAQALGVSS  |
|   |   |     |                                     | }                          |  | LKDGQLEVILDRRLMQDDNRGLGQ  |
|   |   |     |                                     |                            |  | GLKDNKRTCNRFRLLLERRTVGSE  |
|   |   |     |                                     | [                          |  | VQDSHSTSYPSLLSHLTSMYLNAPA   |
|   |   | 1 1 |                                     | l                          | !  | LALPVARMQLPGPGLRSFHPLASSL   |
|   |   |     |                                     |                            |  | PCDFHLLNLRTLQAEEDTLPSAETA   |
|   |   | 1 1 |                                     | ĺ                          |  | LILHRKGFDCGLEAKNLGFNCTTSQ   |
|   |   | 1 1 |                                     |                            |  | GKVALGSLFHGLDVVFLQPTSLTLL   |
|   |   |     |                                     |                            |  | YPLASPSNSTDVYLEPMEIATFRLRL  |
|   |   |     |                                     |                            |  | G   |
| 4542  | 10039                                   | A   | 4839                                | 2                          | 438  | FVPAKVAGAAEPDEDGGRSRLRDC  |
|   |   | 1   |                                     |                            |  | GDYTPSERLGPKGAMLWFQGAIPA  |
|   |   |     |                                     |                            |  | AIATAKRSGAVFVVFVASDDEQSTQ   |
| ' I   |   | 1 1 |                                     |                            |  | MAASWEDDKVTEASSNSFVAIKIDT   |
| :   |   | 1 1 |                                     |                            |  | K/QMHLLKSETSVANGSQSESSVST   |
| 1.7.10                                      | 10010                                   | 1_1 | 1010                                |                            |  | PSASFEPNNTCENSQSRNAELCEI  |
| 4543  | 10040                                   | A   | 4840                                | 1                          | 1608   |   |
| 4544  | 10041                                   | A   | 4841                                | 1                          | 3117   | MAPEWRPGTTASLPSGPGARSVCSL   |
|   |   | 1   |                                     |                            |  | RSPEAGSASVFVRLCGPRNLGWFGP   |
| ĺ   |   | [   | [                                   | [                          | ĺ  | HLRLRTSAHARQRHPKTRASAREN  |
| Ì   |   |     | Ì                                   | 1                          |  | TSRHSRNPSVSVPQDLLSLASRCAG   |
|   |   | 1   | ļ                                   | ļ                          | ļ  | SIPITLESCLPVGLSKDVWPLTIEPKV   |
| 1   |   |     | ļ                                   |                            | 1  | KVFIFNLKLPDCPSTMKNPASLLFSL  |
|   |   |     |                                     | 1                          | ĺ  | FEGEWAIAEEVLSDIWCTGVLAINK   |
|   |   |     | ļ                                   | 1                          | 1  | DQVLTIGFDINEFLSCSSSSKKSMSC  |
|   |   |     |                                     | ]                          | ļ  | SLTGSLALQPDQQQDHETTDSSPAS   |
|   |   |     |                                     | ĺ                          | ĺ  | AYQRIWEAFANQSRAERDAFLQDT<br>FPEGFLWGASTGAFNVEGGWAVG   |
|   |   |     |                                     |                            |  | LI POLD MOVOTOVLIA EGO MY AQ  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|-------------------------|--|---|
| 4545  | 10042                                   | A   | 4842                                | 3                       | 790  | GRGVQPKHVKEAFRLLNKSIIRVET PDVNLDQEEEIQMEVDEGAGGING HADSPAPVNGINGYNEDINQESAPK ASLRLGFSEYCRISNLIVLHLRKVEE EEDESALKRSELVNWYLKEIESEIDS EEELINKKRIIEKVIHRLTHYVEYFSS LHASQITHYKVFLSWAQLLPAGSTQ NPDEKTVQCYRRLLKALKTARLQP MVILHHQTLPASTLRRTEAFADLFA DYATFAFHSFGDLVGIWFTFSDLEE VIKELPHQESRASQLQTLSDAHRKA YEIYHESYAFQGWLAFTHMSQTLA NKIRVRGMAQESCSHGSSVGYLQH PGSEQVQFPRTTSPCSSQQLQGHQC TAGPPPPPGGGMVMMQLSVPNNPQ SCAHSPPQWKQNKYYCDHQRGQK CVEFSSVDNIVQTSLNCTDPVVCVP SSFFIGDSGIPLEVIAGSVSADELVT RIHKVRQMHLLKSETSVANGSQSES SVSTPSASFEPNNTCENSQSRNAEL\ CEIPPTSDTKSDTATGGESAGHATFL FREPSGCSDQRPAEDLNIRVERLTK K\LEERREEKRKEEEQREIKKEIERR KTGKEMLDYKRKQEEELTKRMLEE RNREKAEDRAARERIKQQIALDRAE RAARFAKTKEEVEAAKAAALLAKQ AEMEVKRESYARERSTVARIQFRLP DGSSFTNQFPSDAPLEEARQFAAQT SVRVTSSEPPNPASSSKSEKREPVRK RVLEKRGDDFKKEGKIYRLRTQDD GEDENNTWNGNSTQQM |
|   |   |     |                                     |                         |  | VLSRGPPASPPSSYHPSLGPGG/GGQ *PLPEYGLESSEQN*GLSPGEDPGNP GGPFWGSG\PAGSLMEA*GNKRDA PPPPG\DPSCSAPC/GDPPGMQGIQDS LPCHTASQKGGAFPFGPMAPGRVL HQQGPL*GPSRLSQESPSAGPPMPQ LPSWVLCQVRPRAWGCWEPKGPPG TQFPPRFPDPSGTPCPPGYLEIFLLDP IPPRNWLAPLAAAAQ**/PWGRWE MPMALPRGGLPLYT  |
| 4546  | 10043                                   | A   |                                     | 1                       | 1026   |   |
| 4547  | 10044                                   | A   | 4844                                |                         | 722  | MALEQRLKGGSGAALRSKAFPAEG<br>TAGAKALGQESDWSIGGAVSKPVF<br>VQSVRELVADPCASNPCHHGNCSSS<br>SSSSSDGYLCICNEGYEGPNCEQAL<br>PSLPATGWTE/CHGTPTASACSCYS<br>GA*Q/QSCLALRQR*HCLPGSRKQG\<br>KSCRNEMGSSGGDPRYCLWECQF*<br>QLCGWPPGIL*SATEHLSQDSARCH<br>CLTDFALEGHGHRIPTVLPHRWTKC<br>DPPSGFRGTGPPGGDARLGE   |
| 4548  | 10045                                   | A   | 4845                                | 2                       | 2028   | CSPAAPRRPVRSCCPRWPCCCCCSE<br>RGPEAAPWPTRCPPRPCL/LPGPCAA<br>QPCRNGGVCTSRPEPDPQHPAPAGE<br>PGYSCTCPAGISGANCQLVADPCAS<br>NPCHHGNCSSSSSSSSDGYLCICNEG   |

| NO: of microtrodic designation of land in USN, and the sequence of the properties of | SEQ ID   | SEQ ID   | Me    | SEQ ID NO: | Nucleotide  | Nucleotide       | Amino acid sequence ( X=Unknown; *=Stop           |
|--|----------|----------|-------|------------|-------------|------------------|---|
|  | NO: of   | NO: of   | tho   | in USSN    | location of | location of last | codon; /=possible nucleotide deletion; \=possible |
|  |          |          | d     | 09/770,160 | L           |                  | nucleotide insertion)                             |
| Sequence   | sequence | sequence |       |            |             |                  |   |
| PTASACSCYSGA*QNPASLSGGDPR  |          |          |       |            | sequence    |                  | 1   |
| PTASACSCYSGA*QNPASLSGGDPR  |          |          |       |            |             |                  | YEGPNCEQALPSLPATGWT/AIHGT                         |
| AYLAAENRAESCRNEMGSSGODPR   YCLWECQF*0LCGQPF0LCSATEH   LSQDSARCICLTDFALEGHGINEFT     VLPHRWTKCDPPSGFRGTGPPGGD     ARLGE*SLYCFVNDSVTKS/NCGFA     LNSGGEWSTCVPGGSHANDLECSG     ARLGE*SLYCFVNDSVTKS/NCGFA     LNSGGEWSTCVPGGSHANDLECSG     ARLGE*SLYCFVNDSVTKS/NCGFA     LNSGGEWSTCVPGGSHANDLECSG     ARLGE*SLYCFVNDSVTKS/NCGFA     LNSGGEWSTCVPGGSHANDLECSG     ARLGE*SLYCFVNDSVTKS/NCGFA     LNSGGEWSTCVPGSHANDLECSG     ARLGE*SLYCFVNDSVTKS/NCGFA     CREYDACQRKPCQNNASCIDANEK     QDGSNTTCVLPGSHANDLECSG     CPSTAGLEKYPLCASSPCLONA     CYUDPCRNGATCISSLSGFTCQCE     GYFGSACEKVPPCASSPCQNNCT     CYUDPCRNGATCISSLSGFTCQCE     GYFGSACEKVPPCASSPCCNAA     CYUDPCRNGATCISSLSGFTCQCE     TCRDLVNGYECVCLAEYKGTHCEL     YCNDCAKSACLNGATCDSOBLA     TCRDLVNGYECVCLAEYKGTHCEL     YCNDCAKSACLNGATCDSOBLA     TCRDLVNGYECVCLAEYKGTHCEL     YCNDCAKSACLNGATCDSOBLA     TCRDLVNGYECVCLAEYKGTHCEL     YCNDCAKSACLNGATCDSOBLA     TCRDLVNGYECVCLAEYKGTHCEL     YCNDCAKSACLNGATCDSOBLA     TCRDLVNGYECVCLAEYKGTHCEL     YCNDCAKSACLNGATCSDBCATT     TSCFAVRSRPRRISCLSCPGGGA     ASGLORAAGGTGLSWYPAGLRVCC     SQRSWRPAKEEQPVQTPRRTCKGG     EISDMEKPYNNKEGOLEPGGFORG     AASGLORAAGGTGLSWYPAGLRVCC     SQRSWRPAKEEQPVQTPRRTCKGG     SECEGKPQGECKPASQAKPESQPR     AAEKRPA*RLCGPGKAKK/NKPDQ     CRTITIFYCLSGCLTCKASEQ*GDD     RRWWCVKGSRGA     AAEKRPA*RLCGPGKAKK/NKPDQ     CRTITIFYCLSGCLTCKASEQ*GDD     RRWWCVKGSRGA     AAEKRPA*RLCGPGKAKK/NKPDQ     CRTITIFYCLSGCLTCKASEQ*GDD     RRWWCVKGSRGA     AAEKRPA*RLCGPGKAKK/NKPDQ     CRTITIFYCLSGCLTCKASEQ*GDD     RRWWCVKGSRGA     AAEKRPA*RLCGPGKAKK/NKPDQ     CRTITIFYCLSGCLTCKASEQ*GDD     RRWWCVKGSRGA     AAEKRPA*RLCGPGKAKK/NKPDQ     CRTITIFYCLSGCLTCKASEQ*GDD     AAEKRPA*RLCGPGKAKK/NKPDQ     CRTITIFYCLSGCLTCKASEQ*GDD     CRTITIFYCLSGCLTCKASEQ*GDSD     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYCHT     CRTITIFYC   |          |          |       |            | 1           |                  | PTASACSCYSGA*QNPASLSGNGDT                         |
| LSQDSARCHCLTDFALEGHGHRIPT   VLPHRWTKCOPPSGFRGTGPPGDO     ARLGE*SLYCPVNDSVTKS/NCGFA     LNSGEVSTCVPGESHANDLECSG     KGKCTTKPSEATFSCTCEEQYVGTF     CEFYDAQQRKPCQNNASCIDANEK     QDGSNFTCVCLPGYNNELCQSKID     YCILDPCRNGATCISSLSGFTCQCPE     GYFGSACEEKVDPCASSPQCQNNGT     CYVDGVHFTCNCSPGPTGPTCAQLI     DFCALSPCAHGTCRSVGTSYRCLCC     PGYHGLYCEEYNECLSAPCLNAA     TCRDLVNKYECVCLAEYKGTHCBL     YKDPCAKSACLMGATCDSDGLNG     TCICAPGFTG*BCDIDINEC/ATVTP     CHIGGSSCLGQPRGYTCHCPHGW     VGANCEIHLHWEVPGTWAESLTIM     PRIPPPLTFHWEPLRGPFHPYADHF     DRGGLPHQPH     TISCPAVRSRRPRISCLSCPGGGGA     ASGLQRAAGGTGLSWVPAGLRVCC     SQRSWRPAKEQPVQTPRRTGKGG     EISDMEKPYNKNEGNLENEGRPEDE     V*PDDEGKSY*BEKPYA*GMTECEG     KLKAAGEPGBGGLEDNGSQEKQG     KSECGKPQGEGKPASQAKPESQPR     AAEKRA*RLCPGYAKK/NKPDQ     GDRTIFPQGLSGGLTGKASEQ*GDD     ERNWYCVKGSRGA     4847   180   866     GAYVHGGRGLCVQSLFQGVSSSDF     CPPJPTLVPTLRPRAPCLWCTQDPAR     PPCQSQRRGLGPPQGNGLKPSPGLL     PRILLPESPSKRFNHGQLPVPQTVFG     GGGSRPPLLVPSLPLPVPFFCGCF     LSQPRGHRSPPSSP*BEG*STPLLSVC     HSHTDLWGLSWAVPAGWTGPSALF     FNILLPESPSKRFNHGQLPVPQTVFG     GGGSRPPLLVPSLPLPVPFFCGCF     LSQPRGHRSPPSSP*BEG*STPLLSVC     HSHTDLWGLSWAVPAGWTGPSALF     FNILLPESPSKRFNHGQLPVPQTVFG     GGGSRPPLLVPSLPLPVPFFCGCF     LSQPRGHRSPPSSP*BEG*STPLLSVC     HSHTDLWGLSWAVPAGWTGPSALF     FNILLPESPSKRFNHGQLPVRVINKMWV     FNILLPESPSKRFNHGGLPVR     GSWHTPLPTSYQSLLFVGKDLPVK     SPQAVNRLPITRPATTFHHSPREAP     GROWNTLPTSPTGFNHCMLSVLL*T     TYPRAVIKSVLYMQI*D*D*WKIESSET     DLHISSHLIFDKDNKMEKSLKK.WD     VYSSIRKINLDL*HPYNINMIWN     DLKIKRF*IATZENIFVTFSNVGND     LFKYQLKSKIKKKKMWVYVYMY     P     GSWHHIPFEGALRGPIPGAAGKPG     CSCAPGSAPLPRLRP*/PAPCGSSD     VPRTPORRGLGSFGPPAPAAPARAE*     LLQGEFFSDPQLSPRQLR     LSGVCTVHIRGVCVVWAGGNPSGTE     LLQGEFFSDPQLAPERQLR     LSGVCTVHIRGVCVVWAGGNPSGTE     LSGSVCTVHIRGVCVVWAGGNPSGTE     LSGSVCTVHIRGVCVVWAGGNPSGTE     LSGVCTVHIRGVCVVWAGGNPSGTE     LSGSVCTVHIRGVCVVWAGGNPSGTE     LSGVCTVHIRGVCVVWAGGNPSGTE     LSGVCTVHIRGVCVVVAGGNPSGTE     LSGCCTVHIRGVCVVWAGGNPSGTE     LSGVCTVHIRGVCVVVAGGNPSGTE     LSGVCTV   |          | İ        | İ     |            |             |                  | AYLAAENRAESCRNEMGSSGGDPR                          |
| VLPHRWTKCDPPSGFRGTGPFGGD   |          | }        | 1     | l          | 1           | 1                | YCLWECQF*QLCGWPPGIL*SATEH                         |
| ARLGE*SLYCFVNDSVTKS/NCGFA  |          |          | ļ     |            | •           |                  | LSQDSARCHCLTDFALEGHGHRIPT                         |
| LNSGGEWSTCVPGESHANDLECSG   KGKCTTKPSEATFSCTCEQYVGTT   CEFYDACQRKPCQNNASCIDANEK   QDGSNFTCVCLPGY\NGELCQSKID   YCILDPCRNGATCISSLSGFTCQCFE   GYFGSACEEKVDPCASSPCQNNGT   CYVDGVHFTCNCSPGFTGPTCAQLI   DFCALSPCAHGTCRSVGTSYKCLCT   PGYHGLXCEEFYNECLSAPCLNAA   TCRDLVNGYECVCLAEPYKGTTCEL   YKDPCAKSACLNGATCDSDGLNG   TCICAPGFTGFECDIDINECATVTP   CHHGG\SCLGDQPNGY\TCHCPHGW   VGANCEIHLHWEVPGTWAESLINM   PRHFPLTIFIHWEPLRGPFIPYADHF   DRGDLPHQPH   |          |          | 1     | ľ          | ĺ           | 1                | VLPHRWTKCDPPSGFRGTGPPGGD                          |
| KGKCTTKPSEATFSCTCEEGYYGNET   |          | 1        | 1     | }          | ł           |                  | ARLGE*SLY\CFVNDSVTKS/NCGFA                        |
| CEEYDACQRKPCQNNASCIDANES   |          |          |       |            |             | İ                |   |
| QDGSNFTCVCLPGYNGELCQSKID   YCILDPCRNGATCISSLSGFTCQCPE   GYFGSACEEKVDPCASSPCQNNGT   CYVDGYHFTCNCSPGFTGPTCAQID   DFCALSPCAHGTCRSVGTSYKCLCE   PGYHGLYCEEFYNECLSAPCLNAA     TCRDLVNGYECVCLAEYKGTHCEL   YKDPCAKKSACLNGATCDSDGLNG     TCICAPGFTG**ECDIDINEC/ATVTP     CHHGGSCLGDQPNGYTCHCPHGW     VGANCEIHLHWEVPGTWAESLTNM     PRHPPLITHHWEPFLRGPFHPYADHP     DRGDLPHQPH     4549  |          |          | 1     |            | 1           |                  | KGKCTTKPSEATFSCTCEEQYVGTF                         |
| VCILDPCRNGATCISSLSGFTCQCPE   |          | ł        |       | l          | ļ           | 1                |   |
| GYFGSACEEK VDPCASSPICQNNGT   CYVDGVHFTCNCSPGFTGPTCAQLI   DFCALSPCAHGTCRSVGTSYKCLCE    PGYHGLYCEEEYNECLSAPCLINAA   TCRDLVNGYECVCLAEYKGTHCBLE   YKDPCAKSACLNGATCDSDGLNG   TCICAPGFTGF*ECDIDINEC/ATVTP   CHHGGSCLGDQPNGYTCHCPHGW   VGANCEIHLLIIWEVPGTWAESLTNM   PRHFPLTFITHWEPFLRGPFHPYADHP   DRGDLPHQPH     4549   |          | j        |       | }          | j           |                  |   |
| CYVDGVHFTCNCSPGFTGPTCAQLI  |          |          |       |            |             |                  |   |
| DFCALSPCAHGTCRSVGTSYKCLOE   PGYHGLYCEEYNECLSAPCLNAA   TCRDLVNGYECVCLAEYKGTHCEL   YKDPCAKSACLNGATCDSDGLNG   TCICAPGFTG**ECDIDINEC/ATVTP   CHHGG\SCLGDQPNGY\TCHCPHGW   VGANCEIHLHWEVPGTWAESLTNM   PRHFPLTFITHWEPFLKGFFHPYADHP   DRGDLPHQPH     4549  |          | 1        | 1     | 1          | }           |                  |   |
| PGYHGLYCEEYNECLSAPCLNAA   TCRDLVNGYECVCLAEYKGTHCEL   YKDPCAKKSACLNGATCDSDGLNG   TCICAPGFTG**ECDIDINEC/ATVTP   CHHGG\SCLGDQPNGYTCHCPHGW   VGANCEIHLHWEVPGTWAESLTNM   PRHFPLTFIHWEPFLRGPFHPYADHP   DRGDLPHQPH     4549   |          | ]        |       |            |             |                  |   |
| TCRDLVNGYECVCLAEYKGTHCEL YKDPCAKSACLNGATCDSDGLNG TCICAFGFTG\(^{\frac{1}{2}}\)ECDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CTCPHG\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CTCPHG\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINEC\(^{\frac{1}{2}}\)CDIDINE\(^{\frac{1}{2   |          |          |       | Ì          | 1           |                  |   |
| VKDPCAKSACLNGATCDSDGLNG   TCICAPGFTG\*ECDIDINEC\ATVTP   CHIGG\*SCLGDQPNGY\TCHCPHGW   VGANCEI HLHWEVPGTWAESLTNM   PRHFPLTFHHWEPFLRGPFHYADHP   DRGDLPHQPH     4549   |          | 1        | {     | ĺ          |             |                  |   |
| 10046  |          | )        | 1     | )          | ) .         |                  |   |
| CHHGGSCLGDQPNGYITCHCPHGW VGANCEIHLHWEVPGTWAESLTNM PRHIPPLTIFIHWEPPLRGPFHPYADHP DRGDLPHQPH  4549  10046  A 4846  1 703  TISCPAVRSRRPRRISCLSCPGGGGA ASGLQRAAGGTGLSWVPAGLRVCC SQRSWRPAKEEQPVQTPRRTGKGG EISDMEKPYNKNEGNLENEGKPEDE V*PPDEGKSV*EEKPPA*GNTECEG KLKADGEPGDEQLEDNGSQEKQG KSECEGKPQGEGKPASQAKPESQPR AAEKRPA*RLCGPGKAKK/NKPDQ GDRTIFPQGLSGGLTGKASEQ*GDD ERMWRCVKGSRGA  4550  10047  A 4847  180  866  GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQGVAGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK 4551  10048  A 4848  112  679  KI*NNWCYSDTGQFNVVKLSVLL*I TYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKENKRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKKWDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMMMVYYQMV P  4552  10049  A 4849  33  394  GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAAPAKAE* LLQGGFFSDPQLAPEPPQLR  4553  10050  A 4850  2 269  LSGVCTYHIRGVCVWAGGNPSGTE  |          |          |       |            |             |                  |   |
| VGANCEIHLHWEVPGTWAESLTNM   PRHFPLTFIHWEPFLRGPFHPYADHP   PRHFPLTFIHWEPFLRGPFHPYADHP   DRGDLPHQPH     4549   |          |          | 1     |            | 1           |                  |   |
| PRHFPLTFIHWEPFLRGPFHPYADHP   |          |          |       |            |             |                  |   |
| DRGDLPHQPH   |          |          |       |            |             |                  |   |
| 10046  |          |          |       |            | [           |                  |   |
| ASGLQRAAGGTGLSWVPAGLRVCC SQRSWRPAKEQPVQTPRRTGKGG EISDMEKPYNKNEGNLENEGKPEDB V*PDDEGKSY**EEKPYA**GNTECEG KLKADGEPGDEGQLEDNGSQEKQG KSECEGKPQGEGKPASQAKPPESQPR AAEKRPA*RLCGPGKAKK/NKPDQ GDRTIFPQGLSGGLTGKASEQ**GDD ERMWRCVKGSRGA  4550 10047 A 4847 180 866 GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQGVAGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGRGPPLLVPPSLPLFVFFFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK 4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIESSET DLHISHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTTSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDQPQLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  | 4540     | 10046    |       | 1946       | 1           | 702              |   |
| SQRSWRPAKEGPVQTPRRTGKGG  | 4349     | 10046    | A     | 4840       | ] 1         | 703              |   |
| EISDMEKPYNKNEGNLENEGKPEDE V*PPDDEGKSY*EEKPYA*GNTECEG KLKADGEPGDEGQLEDNGSQEKQG KSECEGKPQGEGKPASQAKPESQPR AAEKRPA*RLCGPGKAKKNKPDQ GDRTIFPQGLSGGLTGKASEQ*GDD ERMWRCVKGSRGA  4550  10047  A 4847  180  866  GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQGVAGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSVQSLLFYGKDLPVK 4551  10048  A 4848  112  679  KI*NMWCYSDTTQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKENKRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDII VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552  10049  A 4849  33  394  GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553  10050  A 4850  2 269  LSGVCTVHIRGVCVWAGGNPSGTE  |          |          |       |            |             |                  | ASGLQKAAGGTGLSWVPAGLRVCC                          |
| V*PDDEGKSY*EEKPYA*GNTECEG   KI.KADGEPGDEGQLEDNGSQEKQG   KSECEGKPQGEGKPASQAKPESQPR   AAEKRPA*RLCGPGKAKK/NKPDQ   GDRTIFPQGLSGGLTGKASEQ*GDD   ERMWRCVKGSRGA     4550  |          |          |       |            | 1 1         |                  |   |
| KLKADGEPGDEGQLEDNGSQEKQG KSECEGKPQGEGKPASQAKPESQPR AAEKRPA*RLCGPGKAKK/NKPDQ GDRTIFPQGLSGGLTGKASEQ*GDD ERMWRCVKGSRGA  4550  10047  A 4847  180  866  GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRGLGPFQG\GALKPSPGLL PNILLPSSPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK 4551  10048  A 4848  112  679  KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552  10049  A 4849  33  394  GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553  10050  A 4850  2 269  LSGVCTVHIRGVCVWAGGNPSGTE  |          |          |       |            | <b>!</b>    |                  |   |
| KSECEKPQEGKPASQAKPESQPR AAEKRPA*RLCGPGKAKK/NKPDQ GDRTIFPQGLSGGLTGKASEQ*GDD ERMWRCVKGSRGA  4550  10047  A 4847  180  866  GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQGIAGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK 4551  10048  A 4848  112  679  KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKENKRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552  10049  A 4849  33  394  GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553  10050  A 4850  2 269  LSGVCTVHIRGVCVWAGGNPSGTE   |          |          |       |            |             |                  |   |
| AAEKRPA*RLCGPGKAKK/NKPDQ GDRTIFPQGLSGGLTGKASEQ*GDD ERMWRCVKGSRGA  4550 10047 A 4847 180 866 GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQG\AGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK  4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYJFNKILSSFLVKTGKLSLKSVN/NK QQSRTIKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | :        |          | 1 '   | :          | ĺ           |                  |   |
| 4550 10047 A 4847 180 866 GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQGVAGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKENKRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  |          |          |       |            | }           | ı                |   |
| BERMWRCVKGSRGA   |          |          |       |            |             |                  |   |
| 4550 10047 A 4847 180 866 GAYVHGGRGLCVQSLFQGVSSSDF CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQG\AGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   |          |          |       |            |             |                  |   |
| CPPIPTLVPTLRPRAPCLWCTQDPAR PPCQSQRRGLGPFQG\AGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVPFFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK 4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*T IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKENIKRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P 4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | 4550     | 10047    |       | 4847       | 180         | 866              |   |
| PPCQSQRRGLGPFQG\AGLKPSPGLL PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  |          | 10017    | 1 1 1 | -1017      | 100         | 000              |   |
| PNILLPESPSKRFNHGQLPVPQTVFG GGGSRGPPLLVPPSLPLFVFFFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRIPITRPAPTHPHSPPREAP GRW*TPLPTSYQSLLFYGKDLPVK KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKENKRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552  10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  |          |          |       |            | [           |                  |   |
| GGGSRGPPLLVPPSLPLFVFPFCGCF LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK  4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | }        |          | 1 1   |            | 1           |                  |   |
| LSQPRGHRSPPSSP*EEG*STPLLSVC HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK  4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   |          |          |       |            | ļ ,         |                  |   |
| HSHTDLWGLSWAVPAGWTGPSALF SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK  4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | •        |          |       |            |             |                  |   |
| SPQAVNRLPITRPAPTHPHSFPREAP GRW*TPLPTSYQSLLFYGKDLPVK  4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  |          |          | 1 1   |            |             | i                |   |
| 4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P 4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   |          |          |       |            | j           |                  |   |
| 4551 10048 A 4848 112 679 KI*NMWCYSDTGQFNVVKLSVLL*I IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   |          |          |       |            |             |                  |   |
| IYIFNKILSSFLVKTGKLSLKSVN/NK QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  | 4551     | 10048    | A     | 4848       | 112         | 679              |   |
| QQSRITKTSKEN\KRGGFMR*DIKTF YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | }        |          | 1 1   | j          | J           | j                |   |
| YVFAVIKSVLYMQI*ID*WKIIESSET DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  | ]        |          |       |            |             | ŀ                | 1   |
| DLHISSHLIFDKDNKMEKSLKK\WDI VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  |          |          | 1 1   | ľ          |             | 1                |   |
| VYSSHRKIINLDL*HIPYVNINMIWN IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   |          |          |       | ļ          |             | Į                |   |
| IDLKIKRFF*IAT/ENIFVTFSNVGND FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  |          |          |       |            |             |                  |   |
| FLKYQLKSKIKKLKMRMVVYQMV P  4552 10049 A 4849 33 394 GSVWHHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR  4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  | İ        |          | 1 1   |            |             |                  |   |
| P 4552 10049 A 4849 33 394 GSVWHPFEGALRGPIPGAAGKPG LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | }        |          | 1     | ļ          |             |                  |   |
| LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  |          |          |       |            |             |                  | ,   |
| LGTPSHPGLSPHPAACAACPRLPGL CSCAPGSAPLPRLRP*/PAPCGSSDS VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  | 4552     | 10049    | A     | 4849       | 33          | 394              |   |
| CSCAPGSAPLPRLRP*/PAPCGSSDS<br>VPRTP/GRRGLGSPGPPAPAAPKAE*<br>LLQGGEFFSDPQPLAPEPRQLR<br>4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | Į        |          |       |            |             |                  |   |
| VPRTP/GRRGLGSPGPPAPAAPKAE* LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   | 1        |          |       |            |             | ļ                |   |
| LLQGGEFFSDPQPLAPEPRQLR 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE  | [        |          |       |            |             |                  |   |
| 4553 10050 A 4850 2 269 LSGVCTVHIRGVCVWAGGNPSGTE   |          |          |       |            | }           | ł                | ·   |
|  | 4553     | 10050    | A     | 4850       | 2           | 269              |   |
|  |          |          |       | ĺ          | 1           | [                | LPGPLPPRPSASPPHPPPQG*GVALP\                       |

| SEQ ID<br>NO: of<br>nucleo-tide | SEQ ID<br>NO: of<br>peptide | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---------------------------------|-----------------------------|-----|-------------------------------------|-------------------------|--|---|
| sequence                        | sequence                    | ļ   |                                     | for peptide<br>sequence | amino acid of peptide sequence                   | DIN FORM IN DONABLE WAS CONTROL   |
|                                 |                             |     |                                     |                         |  | PVLFCFLVLPPHPTPNLIYPPCTVPFS<br>PLPAPFAFFCW  |
| 4554                            | 10051                       | A   | 4851                                | 1                       | 543  | LLSKWIITPSGAGSGDPPPAASPRR KQRMKIMKTTRSQTPPGRAPAASA SSPTL*TPGRDLESRLRP*PTNLPVR TPPGTAAVCPLLHRP\PQKAPVLGP ARV*ERGE/DANATPKREGLKRA/PP NDTLDFLWLGTPSSTKIKWTRPPAV EPLLVLHPTPTLPPLPVVPIVTQRVE YQGRFF  |
| 4555                            | 10052                       | A   | 4852                                | 831                     | 1301   | FFVFTFKYKNTILLCVINQGPSSKNL<br>FFFQGRDIHQFILSFVFRAGHLVPSQ<br>ASPTSKRPKPFSLIPNPYLLS*FPLLIE<br>KLVINFLKKKFPTTRASP*PNQSTSR<br>SSPFSYPGRRVPPLQT\SSVPELRTPY<br>WTGAPPLNGSSGYVSPTLPPPLMH   |
| 4556                            | 10053                       | A   | 4853                                | 1                       | 1222   |   |
| 4557                            | 10054                       | A   | 4854                                | 2                       | 563  | AHVIIYRFSMH*VITDVIPMLEVRSV<br>YEINDVGTPEGEQ\TPPLPTPVGGSN<br>PQPIPAQSHPSTSSSSSDGLRDNVPW<br>LKVKNSPLKQSPGYQTELVIQLVW<br>VGGEPPQQIASLAVNSSYGLVDFGN<br>CNGIAMVDYLQKAVLLNLGTIELY<br>GSNDPYRREPRSPRKSRQPSGAGLC<br>DISEGLVPSKA   |
| 4558                            | 10055                       | A   | 4855                                | 648                     | 1377   | EYLHGGWEHLQKRSLSPATGGGQG<br>QLGAEGGP/GPGGGAAPAHPLLAPN<br>QACGVGLIDWRPRWTRGGTAAAG<br>ARTPNLNPGAALTP/GRHSCVSVKK<br>GSESLELSRRR/TLPVVSPPGGGCE<br>MLRPDPASSP\SSQTP*PVPGAEAQT<br>LALSCPPNSCPAKEVGAAGF*APLH<br>LLSPSVGEGGGASGSTPKVSSFPLPF<br>GGPLHSP*Y*PGPENWEGGGDEGPL<br>SHPARVPAAQSETECVPTESPFQ |
| 4559                            | 10056                       | A   | 4856                                | 3                       | 394  | SQAPS/GVAAHTPPLS*AWTQPWNS IHMALASTRPNMPLRSGPA\CMPQL QLQELFTRSLVESELRIAPSEYPDES PIEQLEERRQLLEQPISLDVMLEPYI LRRSKLDLLYTDSDSDLQLYKEQGE GQGDR   |
| 4560                            | 10057                       | A   | 4857                                | 3                       | 666  | SLLPKIFIGCLRRASSGPGAGNMLGS PSPQPLVSILGIAESWSTLPQGQPPA NPEAWAGPAGAKTDKSKT*GHFTP ETLPNVPKKDPLQLGA*KPGGSKPS EE/VWSQ/SPGPWLRNSGFFPPSLNP RWGPFPSTLWERF*NCSQPFRALRN PPVPL*GVLRASNPWPPPHPHTHPA NMPPAPPRVRLRSSSTSAPPPWGCT QGPRGARAGA*AGAASS*SRGR  |
| 4561                            | 10058                       | A   | 4858                                | 3                       | 361  | FFFFRKWVNIFANYM*KKLILKIYQ<br>QL*KLNHKVQ*LDL*MNKQNFHQK<br>TTQM/AKKHLTGCTKLLICREMKK<br>KTQ*QRNHLTPIRMATIYFLKNAN/C<br>W**CNKNETHVGCWWKTKM*SLF  |
| 4562                            | 10059                       | A   | 4859                                | 3                       | 397  | DQPTDIILDEQ*LELFHLRTGIRRGC<br>PVSSLPFN/IRAIRQEK*IKGIQLGKEI  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  KLALFADMILYLENPEDS/AQKL/LR  |
|---|---|-----|-------------------------------------|---|--|---|
|   |   |     |                                     |   |  | LINNFSQVSGYKINAQKLGAFLYTN<br>NVQAE/SQIKNPIPFTVAIKKLKYLKI<br>HLAKE   |
| 4563  | 10060                                   | A   | 4860                                | 2   | 328  | AHIDAVNEAMRLLEHGFHAPTMSW PVSGTLMVEPIETEDHA*LDRFWDA LINLLQGIADIEDGRICPRVNPLKMS PHSLTCVTSSHWDRA\YSEKGAAFP LPFVKPENK   |
| 4564  | 10061                                   | A   | 4861                                | 13  | 410  | NKMRRQATDRDKMLAKDTFDK\GT<br>LEIYNQFLKFNNKKMSIPIK*WAKN<br>L/NSHLTREDIQVANKPMKRCSTSY<br>FIKEMQIKAMTRSRCADIKMAKIQT<br>TDDIKC*RTCTRSTNFPFPALHLFYQ<br>LTFRKSISH  |
| 4565  | 10062                                   | A   | 4862                                | 3   | 293  | DKGLKGFRGFPTFTSFGQPTWLGLG<br>LDLPEPGN*GPGFGCGP/NSRVGPTL<br>SNLGPGPERGPPGPPGLGV*ALKGK<br>RADKKGGASFFPGF*KFPVGLP  |
| 4566  | 10063                                   | A   | 4863                                | 125   | 366  | GIPGERRLEPPG/PKGPPGLSPQIKGN<br>NGPGPQN*VFFGGFKTKVPFGAQG<br>GS/GNPGPKPIFPPGPPKGRKYRVGP<br>MAPPLQ   |
| 4567  | 10064                                   | A   | 4864                                | 79  | 336  | HIATFNALSYVQASKRDKKFFACAP<br>NYSYAVLCECLSSSIHLSSACSHVH<br>C*RHDDDALLWQPHGSIRDDMR*HI<br>ATFNALSYVQASKRDKKFFACAPN<br>YSYAVLCEC\HRRVFIYRQPAPMST<br>VFYNRKDCLQ/TVDRMLIHKVASLK<br>TNDPILSIQAPK   |
| 4568  | 10065                                   | A   | 4865                                | 2   | 512  | KIQIASIRNEIGH/LLTDATYIQRRLR E*CGQLQANKFDNLNGRDKFPGRH KLPKLIQKEMEAGRSGLPLSPRVLG LQA*ATVSGLTGKFYKTCKEEIIPIL TILFQKTEKGTLQ\SS*EETSTILIPNQ EGKKNFQNGCLSMDPGTGKVPLTK ILVNQIQQSVIHKDNISI  |
| 4569  | 10066                                   | A   | 4866                                | 466   | 1451   | EVCGLKKARISLFFF*DGVSLCCPG<br>WSAVAQSRLTATSASRV\K*FSCLSL<br>LSSWDYKRPPPRPANFLHF**RQGF<br>TMLARLVSIS/WIS*SVPPWPPKVLE<br>L*AKAGDSLEPGSSRLQ   |
| 4570  | 10067                                   | A   | 4867                                | 3   | 379  | NKSCQGPRTSFASAGWALKNPRWQ<br>EQKEGLGKAGRPSGMNSSASSPTPG<br>RKRELGMGSPSLSRSPP*CE\GRSDR<br>LG*PP*GGQGGGGHGAPSTPGPGG\<br>GPGDFHSKPPDPSLVPRPTEARGSP<br>GP   |
| 4571  | 10068                                   | A   | 4868                                | 2   | 1718   | SEGAPPRRGAWGGPPARSHTLAPTP PLPP/GPLSLCFACLKWLGVD/HRDG AG*LGSQKAGGRGHPGMGQGKGT PPAHAW*PTGWCTGKP*KLGFLCPF HIPPVSLACFLLSCAASDFSVLTWQ LWGP*EPPTEGGHSPFPSCRC/HRQE EGFLPVWQSPRQRPRMRPDSAPPST SARASKVGPGRGLPLLNFG/QRPNL TPYGPAPALALS*PPQRWEELAEGA |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | PGPQPP\ASKGPFSS*PKVLREPAVE TSSCASAPLAVFVRGVHTCIGG*AP GLSGGHPLTVSF*IGGIEGLDCLSPQ *AWGPGLGLEVCCGSHQASPPGPG VLGAPCPPPPCPPQGG/PAQPVGPS/P SHHGGERE*RGRPHSKLPLPPGVWG GC*RIHSRGPPGLSQPLFCF*PRRLS\ PAQPA*SKGGSRVLGSFCFPLLPGS* GTRASGRGHSPSLKPGPGRAGRQ\G ETRGS\GSPGE*GCWSQNWDRGPA GQPWATSRVSIVRGWRVPGVAGAG FLAVLPWAPPSEARWQEADQNPSA FGPKEWEAAFLPNLPCQGQQRGPSP PPPPGCRNGDPSQGLGAGAEYSLGP LPYT   |
| 4572  | 10069                                   | A | 4869                                | 253   | 451  | RWKAWFGREIKGNNPRCKRGGGK HGTG/EEIKGNNPRWKRGGGKHGT GGK/YKGNNPRWKRGGGKHGTGG K/YKGNNPRWKRGGGKHGTGGKL K/SNNPRW*REGGKHGSGGK/YKGN NPRCKRGGGKHGTGGKLK/SNNPR WKRAGGKHGSGGKFKEIIPDGSVK VESMER   |
| 4573  | 10070                                   | A | 4870                                | 2   | 269  | EGGLGLNRFPPPPGPPRRPAAACMS<br>AP*PQR/HWPP/SPREEKASLNEPGG<br>PGRGRGRGSGQLHGEGGPRGGE/R<br>GNWPGGMEGEGGIDAPAS   |
| 4574  | 10071                                   | A | 4871                                | 20  | 312  | SVMNGTSICKCRANDETGLSPSPAG<br>PKSRSRRLS*LWRPSAATDSGSPPT*<br>PVPTPSPPAPTPARPGSRAPSSPGLA<br>PTLTGPGG\PLRPPPPPAEEP  |
| 4575  | 10072                                   | A | 4872                                | 299   | 472  | KSISVATANPGKCLSCTNSTFTFTTC<br>RILHPSDITQVTPR*/GVPGKSGASLL<br>SSAVFS   |
| 4576  | 10073                                   | A | 4873                                | 1   | 3454   | MKHTLIPRIKNACLQMSSLAVPVNS LVCLGKILEYLDKWLVLDGILPFLQ QIPSKESAVLMGILGIYKCTFTHKLG ITKEQLTGKVLPHLIPLSIENNLNQF NSFISIIKEMLNRLESEHKTKLEQLHI MQEQQKSLDIGNQMNVSEETKVTN IGNQQIDKVFSHIGADLLTGSDSEN KEDGALNVPPAGAKPTQQRPTDMS ALNNLFGPQKPKVSMNQLSQQKPN QWLNQFVPPQVSPATGSSVMGTQM NMIGQSAFDVCSNEDLPEVELVSLL EEQLPQYRLKVDTLFLYENQDWTQ SPHQRQHASDALSPVLAEETFRYMI LGTDRVEQMTKTYNDIDMVTHLLA ERDRDLELAARIGQALLKRNHVLSE QNESLEEQLGQAFDQVNQLQHELC KKDELLRIVSIASEESETDSSCSTPLR FNESFSLSQGLLQLEMLQEKLKELE EENMALRSKACHIKTETVTYEEKEQ QLVSDCVKELRETNAQMSRMTEEL SGKSDELIRYQEELSSLLSQIVDLQH KLKEHVIEKEELKLHLQASKDAQR QLTMELHELQDRNMECLGMLHESQ EEIKELRSRSGPTAHLYFSQSYGAFT |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | GESLAAEIEGTMRKKLSLDEESSLF KQKAQQKRVFDTVRIANDTRGRSIS FPALLPIPGSNRSSVIMTAKPFESGL QQTEDKSLLNQGSSSEEVAGSSQK MGQPGPSGDSDLATALHRLSLRRQ NYLSEKQFFAEEWQRKIQVLADQK EGVSGCVTPTESLASLCTTQSEITDL SSASCLRGFMPEKLQIVKPLEGSQT LYHWQQLAQPNLGTILDPRPGVITK GFTQLPGDAIYHISDLEEDEEEGITF\ QVQQPLEVEEKLSTSKPVTGIFLPPI TSAGGPVTVATANPGK\CLSCTNST F/TLFTTCR/IYLHPSDIT\QVTPSSGV PFHLSCG\SSGSSFHSNTAVNSPALS YRLSIGESITNRRDSNYNLSVGTME VGPKFLQER\GIS\AKVYHSPI\SENPL QPLPK\SL\AIPSTPPNSPSHSPCPSPL PFEPRVHLSENFLASRPAETFLQEM YGLRPSRNPPDVGQLKMNLVDRLK RLGIARVVKNPGAQENGRCQEAEIG PQKPDSAVYLNSGSSLLGGLRRNQS LPVIMGSFAAPVCTSSPKMGVLKED |
| 4577  | 10074                                   | A | 4875                                | 1   | 638  | LAWGGKGKGASSDSGGLVDSISTL TPTPGDTNT/HSDLIVRGGAYGGQW AHGVLAQVQPSVGAEVT\P*PQMGE *TDVCGSQQSPHICSLTLRVGATML GKAR\WKPLG*TLPR\KIV\NSKATC SPGGTAKVSAAIRGLGRCRVVTPTA ASFHSS*\WLVWKTGGSRRKKDSES WVNLTRTPIATAVPDMTTDSLGQIQ SIPGHPVLQPIDPGESL  |
| 4578  | 10075                                   | A | 4876                                | 31  | 448  | PKSLLSLLVKINYGYVPK*QATKAK<br>LDNWDYIKLQSFCITTKIMNRVRRQ<br>PAE*ENIFANQTSDKGLISKIYKELK<br>QLNSKKANNLIKNWSDDLNR/HFSN<br>EDIQMASRYMKKI\STSQIIREMQIK<br>TTMRYHFMPIRMTT  |
| 4579  | 10076                                   | A | 4877                                | 3   | 286  | KFTFKRHHHLQLLKRK*DS*V*T*Q<br>MFMEQIKEDLSKQRDNSCS*IGKLSI<br>AKNIYVSI\IPG*FDAIPIKIPARFFYA<br>FGLYCRNSVSLSPRLN  |
| 4580  | 10077                                   | A | 4878                                | 3   | 236  | ATHSTLPSFQGPVSLASMTVVGIDG<br>KASRPLQTPLVCQLDQHSFLHS/FLV<br>IPTCPVPLLG*GILTKLSASLTIPRLQ<br>P  |
| 4581  | 10078                                   | С | 4879                                | 206   | 262  | MVAIGTGYRRPGLRTFLN*  |
| 4582  | 10079                                   | A | 4880                                | 2   | 756  | LTSSRGARPAPLRAPAR/LDPAFRAN PLSRSYGSGLPTFPYLHCSNMPKAC SPWRPAADMGT\PGARFTPSPPDFQ GPARAPPDAAGTATLSKARAPLSGR NPFQGRPCPSQRKENSPRSSRRTSPG SRRVTDTGRLAGAPCSATPDSGI*T RLPFRIGRGAPEAIAPSLRNGARPSL RTD*PMFQLLGYNWNPSPVRPSKV LRLNICYYTP\SHAPAAAPPGPADFQ GPARAHRTPPEPRRFPRHGPLSRGE P   |
| 4583  | 10080                                   | A | 4881                                | 3   | 322  | MGSVTGPLYSGYKEEVVCCTLVEV   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|--|
|   |   |     |                                     |   |  | FPSLLQVSRNPRMPFDFLGILIFCLG<br>GQGFPRATTVSGHWPE*LSQSSSSP<br>KLRPPTL*SKPAHPGAAEALKAVPR<br>TSAGAR   |
| 4584  | 10081                                   | С   | 4882                                | 240   | 500  | MQNGLSGAYFPSVWAAKDSQERR<br>RSPATGRNDSPRAPLPRSSARRPSK<br>ANLHTLGQLKLSSRCRAPRLRRAA<br>RTRSXSDQXWRRXTT*   |
| 4585  | 10082                                   | A   | 4883 .                              | 22  | 696  | CTFGSFPFPGLSAWSFRASLPPAPAP<br>GPNERFRSPGAGGFWGVDAAGQPA<br>PAEVLGTALRASAAPGCAD*NPKKI<br>KWHPG/SFCSPGEGMEILQQVCSKQ<br>LPPCNLSKEDLLQNPYFSKLLLNLS<br>QHVDESGLSLTLAKEQAQAWKEVR<br>LHKTTWLRSEILHRVIQELLVDYYV<br>KIQDTNVTSEDKKFHETLEQRLLVT<br>ELMRLLSPSQEREIPPLLGLEKADLL<br>E |
| 4586  | 10083                                   | Α   | 4884                                | 1   | 594  | AVVHFRLLPLPGPFILCLSGPRFPQP<br>AAPGPNERFRSPGAGGFWGVDAAG<br>QPSPAEVLGTALRAPAAPG\LQVCF<br>KGSAGGASGKRSSGRVIPA/MWPET<br>VVALGNPWTVQTEGKVGAGEPVL<br>HFDSSRAL*GSVSCENNL*NQFNRS<br>SCSV*RQALRI*KTPESEHLKCLGPC<br>SSVFNTSECRRVENRSLNCPFTPCNL                                   |
| 4587  | 10084                                   | A   | 4885                                | 2   | 326  | VKTAEFVNKWQKNSTKLWNSQAQI<br>DSSSLVNQINDLRQTEIWMGDRIMN<br>LESRIQMQCDWNTSDFCVTPQ\YNE<br>TEH*WKKVKRHLEGREENLTL*IVK<br>LKEQDFEASQ  |
| 4588  | 10085                                   | A   | 4886                                | 2   | 373  | VLLTPEERTVVIALWRKVNVYALC<br>R*GAWA**L*AYPWTHR\FFESFGDI<br>DSSDAVMGKPIVNAHGKNVLGAFS<br>DGQSHLDNLLGTYSQLSELHCDKL<br>HVDPENFKLLGNVLVCVLARNFGK<br>EF   |
| 4589  | 10086                                   | A   | 4887                                | 3   | 332  | HLSIINLNVNQLNSPLKAYTLPVWIP<br>SS\RGPTICCLQEIHFASKNTYKLKV<br>KELSSSFQANEKEKHADKTGFK\PK<br>L*REKNGHYIMIKRSVQKENIYIYM<br>FLIADPDIC  |
| 4590  | 10087                                   | A   | 4889                                | 1   | 304  | HSCSSMRMPPLPTPPP/IVLCPPHPSP<br>LIKALVSSKPP*VPSPAETWPVAAL<br>GA*VPAVLGWPLHTENVLPVPPLPL<br>EMPRIQWHFMLCSFPQRSPRADEST   |
| 4591  | 10088                                   | A   | 4890                                | 1   | 254  | RPRRQFGIEGSFLNQIKNIYKKSTAN<br>VILYVDRLNAFSLISGSSSSSSSSSS<br>SSSSS*LPVNIIRQ/EKVI*GMQIVKEE<br>LNLSL  |
| 4592<br>4593                                | 10089                                   | A   | 4891                                | 2583  | 3580   | SQYFGTLRRVDHLRSGVRDQPGQL<br>GKTPS*PQVIHPPQCPKVLGLQYYH<br>FLFFLRRSL/DSVAQAGVQWRDLGS<br>LQRPPPGFTPFSCLSLPSSWDYRRPP<br>PRLANFFVFSVETGF\TVSARMVSIS<br>*PRDPPASASQSAGDTGVSQAPV<br>DRVSLLLPRLECNGAILAHCNLCLS   |

|  | SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|--|---|---|---|-------------------------------------|-------------------------|---|---|
| 4594   |   |   |   |                                     |                         |   | VFLVEMGFHHIAQAGLELLTS\DSPT LASQSAGITGVNHHAWLFFFCS/RD TVSLCYPGWSRVA*SRITATSA\PGL K*FACFSLPSSRDYRHVPPHPGNFCI FGRDEVSPCWPGWF*TPDLR\YPPA SASQSAEIIGVSHHTWPQEVFLFLNL FIYLRWSL/DSVAQARVQRRDLGSL QAPPPRFKPFSCLSLPSSWDYRRPPP HPANFFVFLVETGF\TVLARRVLIS* PRDLPASASQSAGITGVSHHTR/LIF/ NFFETGTHSVTWAAVQWYTI/GSLQ PRTPELK*SSHLILTSNWDYRCTPPC PPNLFIYLFIYFHRDEGSLCCPGWS* |
| 4595   | 4594  | 10091                                   | C | 4893                                | 40                      | 180   | MSFEAEIVLSPDRTTALHPGLQIETL  |
| 4596   | 4595  | 10092                                   | C | 4894                                | 4827                    | 5060  | MWIYFWTLNSVPVIYMSTLMSIPHY<br>FDYCCFIVSDIMLPEITFSTFILLLMV  |
| SAKDHVKRLKRQTTDWEKIFLNHIS   NK/GLLSRIYY**LQTQY*KTPSNPI/K   KTAKDVKEHFTEEDIQMACNPMKR   CSTSLAVRELQIKTTVRYLKIEFNF     4598   10095   A   4897   I   684     4599   10096   A   4898   I   1349     4600   10097   A   4899   I   821   MLQTWSGYDNPRVTQKVPPFQLNC   LPMTVVLLILYAEVATDWNRVGLT   QGQLLHSLRLDPWSGLTQRTFPTGA   MEISPDYLPPEFIVENTERIDEREKG   REQPPKKTPENKA WPKMLKGKKA   KGKKVAPAPAVVKKQEAKKVVNP   LFEERPKNFGIGQDIQPKRDLTRFVK.   WPRYIRLQQQRAILYKRLKVPPAIN   QFTQALDRQTATQLLKLAHKYRPE   T\SKRRRLAQAEKKAAGKG/VRPT   KR/PPVL*AGVNTVTTLVENKEAQL   DLYCAI     4601   10098   A   4900   I   868   GTRPKMPKGKKAKGKKVAPAPAV   VKKQEG\LAKKVVNPLFEKRPKNFG   IGQDIQPKRDLTRFVK\WPRYIRLQR   QRAILYKRLKVPPAIN\QFTQALGP   RKQATQLA*AWPTKYRPRDKAREG   SRDLFGPGPRKKAAWPKGTFPTKRP   PVPSKQ\G*TTVTTLGGGPRKASAG   WWIAHDVDF\LELGLSFLA\ALCRK   NGGSPY\CIIKGKGQDWGRL\VNKK   TCTTGRLSHR*TSED\NKALLLKLVE   AIRTNYNDRYDEIRRHWGGNVLGP   KVARIJAKLEKAKAKELATKLG   4602   10099   A   4901   145   745   RRRGTQSCNLITIVNHISEITVIMFIE | 4596  | 10093                                   | A | 4895                                | 2                       | 311   | FILHVCDKLILFVSGDTFQTVSPRFL<br>APRTFLAPLQNP*PLSPCAVHISFSRP<br>LPARSPLPP/PRPPPPPTCSTAIPAPTH   |
| 10096  | 4597  | 10094                                   | A | 4896                                | 2                       | 374   | SAKDHVKRLKRQTTDWEKIFLNHIS<br>NK/GLLSRIYK*LQTQY*KTPSNPI/K<br>KTAKDVKEHFTEEDIQMACNPMKR  |
| 4600 10097 A 4899 I 821 MLQTWSGYDNPRVTQKVPPFQLNC LPMTVVLLILYAEVATDWNRVGLT QGQLLHSLRLDPWSGLTQRTFPTGA MEISPDYLPPEFIVENTERIDEREKG REQPPKKTPENKAWPKMLKGKKA KGKKVAPAPAVVKKQEAKKVVNP LFEERPKNFGIGQDIQPKRDLTRFVK. WPRYIRLQQQRAILYKRLKVPPAIN QFTQALDRQTATQLLKLAHKYRPE TISKRRRLLAQAEKKAAGKGVRPT KR/PPVL*AGVNTVTTLVENKEAQL DLYCAI  4601 10098 A 4900 I 868 GTRPKMPKGKKAKGKVAPAPAV VKKQEGILAKKVVNPLFEKRPKNFG IGQDIQPKRDLTRFVK.WPRYIRLQR \QRAILYKRLKVPPAIN\QFTQALGP RKQATQLA*AWPTKYRPRDKAREG SRDLFGPGPRKAAWPKGTFPTKRP PVPSKQIG*TTVTTLGGGPRKASAG WWIAHDVDF\LELGLSFLAIALCRK NGGSPYICIIKGKGQDWGRLIVNKK TCTTGRLSHR*TSED/NKALLKLVE AIRTNYNDRYDEIRRHWGGNVLGP KSVARIAKLEKAKAKELATKLG  4602 10099 A 4901 145 745 RRRGTQSCNLITIVNHISEITVIMFIE   | 4598  | 10095                                   | A | 4897                                | 1                       | 684   |   |
| LPMTVVLLILYAEVATDWNRVGLT QGQLLHSLRLDPWSGLTQRTFPTGA MEISPDYLPPEFIVENTERIDEREKG REQPPKKTPENKAWPKMLKGKKA KGKKVAPAPAVVKKQEAKKVVNP LFEERPKNFGIGQDIQPKRDLTRFVK. WPRYIRLQQQRAILYKRLKVPPAIN QFTQALDRQTATQLLKLAHKYRPE T\SKRRLLAQAEKKAAGKG\VRPT KR\PPVL\*AGVNTVTTLVENKEAQL DLYCAI  4601 10098 A 4900 I 868 GTRPKMPKGK\AKGKKVAPAPAV VK\QEG\LAKKVVNPLFEKRPKNFG IGQDIQPKRDLTRFVK\WPRYIRLQR \QRAILYKRLKVPPAIN\QFTQALGP RKQATQLA\*AWPTKYRPRDKAREG SRDLFGPGPRKKAAWPKGTFPTKRP PVPSKQ\G\*TTVTTLGGGPRKASAG WWIAHDVDF\LELGLSFLA\ALCRK NGGSP\CIIKGKGQDWGRL\VNKK TCTTGRLSHR\*TSED\NKALLLKLVE AIRTNYNDRYDEIRRHWGGNVLGP KSVARIAKLEKAKAKELATKLG  4602 10099 A 4901 145 745 RRRGTQSCNLITIVNHISEITVIMFIE  | 4599  | 10096                                   | A | 4898                                | 1                       | 1349  |   |
| VKKQEG\LAKKVVNPLFEKRPKNFG IGQDIQPKRDLTRFVK\WPRYIRLQR \QRAILYKRLKVPPAIN\QFTQALGP RKQATQLA*AWPTKYRPRDKAREG SRDLFGPGPRKKAAWPKGTFPTKRP PVPSKQ\G*TTVTTLGGGPRKASAG WWIAHDVDF\LELGLSFLA\ALCRK NGGSPY\CIIKGKGQDWGRL\VNKK TCTTGRLSHR*TSED/NKALLLKLVE AIRTNYNDRYDEIRRHWGGNVLGP KSVARIAKLEKAKAKELATKLG  4602 10099 A 4901 145 745 RRRGTQSCNLITIVNHISEITVIMFIE   |   |   |   |                                     |                         |   | LPMTVVLLILYAEVATDWNRVGLT QGQLLHSLRLDPWSGLTQRTFPTGA MEISPDYLPPEFIVENTERIDEREKG REQPPKKTPENKAWPKMLKGKKA KGKKVAPAPAVVKKQEAKKVVNP LFEERPKNFGIGQDIQPKRDLTRFVK. WPRYIRLQQQRAILYKRLKVPPAIN QFTQALDRQTATQLLKLAHKYRPE T\SKRRRLLAQAEKKAAGKG/VRPT KR/PPVL*AGVNTVTTLVENKEAQL DLYCAI   |
| 4602 10099 A 4901 145 745 RRRGTQSCNLITIVNHISEITVIMFIE  | 4601  | 10098                                   | A | 4900                                |                         | 868   | VKKQEG\LAKKVVNPLFEKRPKNFG IGQDIQPKRDLTRFVK\WPRYIRLQR \QRAILYKRLKVPPAIN\QFTQALGP RKQATQLA*AWPTKYRPRDKAREG SRDLFGPGPRKKAAWPKGTFPTKRP PVPSKQ\G*TTVTTLGGGPRKASAG WWIAHDVDF\LELGLSFLA\ALCRK NGGSPY\CIIKGKGQDWGRL\VNKK TCTTGRLSHR*TSED/NKALLLKLVE AIRTNYNDRYDEIRRHWGGNVLGP  |
|  | 4602  | 10099                                   | A | 4901                                | 145                     | 745   | <u> </u>  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | PCGAPGL*TATLLSRLRTARDLGTR<br>L*ASPASPLCAVPSPAAAAFL/SLPLP<br>LCPSSSSARELRSPTPGLSGQPAPAA<br>SPGPG/PAG/PPPPPPLAVRPRFAPHL<br>QLCPGPPFSRPSVLPASSRCQPGLSA<br>PSLPSSPRPPPLRGLGRS  |
| 4603  | 10100                                   | A | 4902                                | 94  | 432  | TFLFFLIFSSEYWKFQKKQYSLEKSL<br>FVAYNHKDG*THFLKGNNQFIFSIA/<br>LFTLGDIIYCKDIFGRLGLQP/TDISSS<br>DSPFLSFSSSIYILTWGQARWLTPVI<br>PAFWEAKAG  |
| 4604  | 10101                                   | A | 4903                                | 109   | 422  | FFEDGVLSRSVAQAGV\QWR\NLSS<br>LQPLPPRFK*FSCFSL\RSRWDYRHA<br>PPCPA\FFVFLVET\GVTILARMVLIS<br>*PRDPPASASQSAGITGVSHCAPSRH<br>SLS  |
| 4605  | 10102                                   | A | 4904                                | 3   | 364  | HEETAYDINILS**TQTFNMARLE*N<br>CCNTIKSISEK/PTANSIR*AKKQEGF<br>FQISGIRQGCLLSSFLFIILEVLARGN<br>R*DKN/GIQIGKKKVELSLFSETMRF<br>NIWKRLWKPHITTRANK  |
| 4606  | 10103                                   | A | 4905                                | 50  | 394  | LSYSWHSIHLLMKIISWHFDGQFSA<br>LVIL*LSVAVDTADYSHFLETASLL<br>DFEFTVLSWFSSYLT/DMFLFTLVFS<br>L\PFSIQLLNIGISQGSVLSPLLYYAS<br>ASGYMSLNIMYRH   |
| 4607  | 10104                                   | A | 4906                                | 49  | 366  | SGSSLAAVFWGPKGPAQAP\GPWAP<br>WASPSGPDLPRPLHPADPQRQRLST<br>VPLPLSRPPALSLIAPMALSHSCSNIP<br>P*TPPPASLRPESLTPARS/PPTR*SHS<br>PPP   |
| 4608  | 10105                                   | A | 4907                                | 119   | 246  | FCFHHLNLPSLFLIF/NVCLCV*QSHS<br>VTQAGEQWRNLGSLQPPPPRFKPFS<br>CLSLPSS*DYRHAPPQLADFCISSRD<br>GVSPCWPGWSQTPDLR   |
| 4609  | 10106                                   | A | 4908                                | 1   | 280  | ESRSVAQAGVLWRDLCSLQPPPPVF<br>K*FSCLSLPSSWNYRCAPPCPASFFV<br>FLVE\QGFTMLARLVLNS*PQ/CDPP<br>TSASQSAGITGMSHCTWP  |
| 4610  | 10107                                   | A | 4909                                | 406   | 661  | SQTPDLR*SAHLSLPKCWDYRR/AA<br>TAPGQNISFKLPNPWEKAKHLMKS<br>T*RLKHFTNFALFV*NCIDD/WMEF<br>ALVAQAGMQWHDLGSLQPLPPQFK<br>WFSC\PASPKCWDYRREPPCPANFF<br>FFLYF**RLGFTMLARVVSNS*PQ/C<br>DPPTSASQSAGITGMSHCAWPFFFF<br>LFFSFFFETGSHCVAQAGLK/PLKLK<br>RSSCLGLRKCWDYRREPLRLAPSW<br>TFRM |
| 4611  | 10108                                   | A | 4910                                | 3   | 459  | ELRDGEKVLDLCAAPGGKLIALLQC<br>ACPGYLHCNEYDSLRLRWLRQTLE<br>SFIPQPLINVIKVSELDGRKMGDAQP<br>EMFDKVLV\DAPCSNDRSWLFSSDS<br>QKAS/W*DKSKEEFAFFYRLGC*GL<br>QLRPLRPGGILVYSTCTLSKAENPR<br>CDQ  |
| 4612  | 10109                                   | A | 4911                                | 1   | 95   | TPKVHASWQK/MAD*SGQCPVLQIP  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  LSSLSMMQ  |
|---|---|---|-------------------------------------|---|--|---|
| 4613  | 10110                                   | A | 4912                                | 253   | 1531   | SWKLAEKVWEAQLPGFPSPPQCSV RCGRGQRSRQVRCVGNNGDEVSEQ ECASSPPQPPSREACDMGPCTTAWF HSDWSSKCSAECGTGIQRRSVVCLG SGAALGPGQGEAGAGTGQSCPTGS RPPDMRACSLGPCERTWRWYTGP WGECSSECCSGTQRRDIICVSKLGT EFNVTSPSNCSHLPRPPALQPCQGQ ACQDRWFSTPWSPCSRSCQGGTQT REVQ/CA*APTRPSAPDALLNCGPPG SAPVNSQPC/MPAP**SMARDSSSTF APWVGTGPGFCVLPLLTQPPVCRSL RTCPGSGLPRIPPERGPGHLHGFLCH HRSPIGLGPLWNPLGSSSLFPGLQQ GMSSR*TEGVGKVNGTQSDFSGTV GQAHVGGCDGVCCTYCLRCCFWG LHGICVWSNVYHFSKRRLHRTLEG TRPVFLEDFS   |
| 4614  | 10111                                   | A | 4913                                | 131   | 355  | STADTLP**TPKLSPQLMDTILPSQS<br>VAMFHT*DHSAPTG/TGAPPHTTPS<br>RPLNTRGPTEEFSPRPPPQHRPSSC  |
| 4615  | 10112                                   | A | 4914                                | 3   | 420  | QQPPTRLD*GPKQLMPHSPHNPHTI* NPAVLSLPPQTKLLGPPVVRGPLLIR *SPQLLPACLPL*RSTRPGTLKPKAT PA\PPPTTVHKPVASLRSHLRADGPG APPHTTPSRPLNTRGPTEEFSPRPPP QHRPSPPPTK   |
| 4616  | 10113                                   | A | 4915                                | 11  | 375  |   |
| 4617  | 10114                                   | A | 4916                                | 3   | 260  |   |
| 4618  | 10115                                   | A | 4917                                | 3   | 208  |   |
| 4619  | 10116                                   | Α | 4918                                | Ī   | 422  |   |
| 4620  | 10117                                   | A | 4919                                | 127   | 4348   | GASISDIQTETTEEDSVLLMHTLLAA TKDSLAMDPPVVNRPKKSKTKKAPI KTITKAAPAAPPVPAANEIATNKPKI TWQALNLPVITQISQALPTTEVTNT QASSVTAQPKKANKMKRVTAKAA QGSQSPTGHEGGTIQLKSPLQVLKL PVISQNIHAPIANESASSQALITSIKP KKASKAKKAANKAIASATEVSLAA TATHTATTQGQITNETASIHTTAASI RTKKASKARKTIAKVINTDTEHIEA LNVTDAATRQIEASVVAIRPKKSKG KKAASRGPNSVSEISEAPLATQIVTN QALAATLRVKRGSRARKAATKARA TESQTPNADQGAQAKIASAQTNVS ALETQVAAAVQALADDYLAQLSLE PTTRTRGKRNRKSKHLNGDERSGS NYRRIPWGRRPAPPRDVAILQERAN KLVKYLLVKDQTKIPIKRSDMLRDV IQEYDEYFPEIIERASYTLEKMFRVN LKEIDKQSSLE\ILISTQESSAGILGTT KDTPKLGLLMVILSVIFMNGNKASE AVIWEVLRKLGLRPGVRHSLFGEV RKLITDEFVKQKYLEYKRVPNSRPP EYEFFWGLRSYHETSKMKVLKFAC RVQKKDPKDWAVQYREAVEMEVQ AAAVAVAEAEARAEARAQMGIGEE |

| SEQ ID                  | SEQ ID              | MAG      | SEQ ID NO: | Nucleatia                  | Nucleatio             | I A in a said source / N. T. T.   |
|-------------------------|---------------------|----------|------------|----------------------------|-----------------------|---|
| NO: of                  | NO: of              | tho      | in USSN    | location of                | location of last      | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible   |
| nucleo-tide<br>sequence | peptide<br>sequence | d        | 09/770,160 | first codon<br>for peptide | codon for last        | nucleotide insertion)   |
| sequence                | sequence            | 1        | Ĭ          | sequence                   | amino acid of peptide |   |
|                         |                     | _ _      |            |                            | sequence              |   |
|                         |                     | T        |            |                            |                       | AVAGPWNWDDMDIDCLTREELGD   |
|                         |                     |          | ]          |                            | }                     | DAQAWSRFSFEIEARAQENADAST  |
|                         |                     |          |            |                            |                       | NVNFSRGASTRAGFSDGASISFNGA   |
|                         |                     |          | · ·        | 1                          |                       | PSSSGGFSGGPGITFGVAPSTSASFS  |
|                         |                     | 1        | l          | 1                          |                       | NTASISFGGTLSTSSSFSSAASISFGC   |
|                         |                     | j        | }          |                            | }                     | AHSTSTSFSSEASISFGGMPCTSASFS   |
|                         | ]                   | ]        | ļ          | ]                          | }                     | GGVSSSFSGPLSTSATFSGGASSGFG  |
|                         | ļ                   |          |            |                            |                       | GTLSTTAGFSGVLSTSTSFGSAPTTS  |
|                         |                     |          |            |                            |                       | TVFSSALSTSTGFGGILSTSVCFGGS  |
|                         |                     |          | 1          | l                          |                       | PSSSGSFGGTLSTSICFGGSPCTSTGF   |
|                         | 1                   | 1        |            | 1                          | l                     | GGTLSTSVSFGGSSSTSANFGGTLST  |
|                         | ļ                   |          |            |                            |                       | SICFDGSPSTGAGFGGALNTSASFGS<br>VLNTSTGFGGAMSTSADFGGTLSTS   |
|                         |                     |          |            |                            |                       | VERTSTOTGGAMSTSADFGGTESTS VCFGGSPGTSVSFGSALNTNAGYG  |
|                         |                     |          |            |                            |                       | GAVSTNTDFGGTLSTSVCFGGSPST   |
|                         |                     |          |            |                            |                       | SAGFGGALNTNASFGCAVSTSASFS   |
|                         | 1                   |          | 1          | 1                          |                       | GAVSTSACFSGAPITNPGFGGAFSTS  |
|                         |                     |          | ļ          |                            |                       | AGFGGALSTAADFGGTPSNSIGFGA   |
|                         | ]                   |          |            |                            |                       | APSTSVSFGGAHGTSLCFGGAPSTS   |
|                         |                     |          |            |                            |                       | LCFGSASNTNLCFGGPPSTSACFSG   |
|                         | ĺ                   | 1        |            |                            |                       | ATSPSFCDGPSTSTGFSFGNGLSTNA  |
|                         |                     |          |            |                            |                       | GFGGGLNTSAGFGGGLGTSAGFSG  |
|                         | i                   | 1        |            |                            |                       | GLSTSSGFDGGLGTSAGFGGGPGTS   |
|                         |                     |          |            |                            |                       | TGFGGGLGTSAGFG  |
|                         |                     |          |            |                            |                       | GGLVTSDGFGGGLGTNASFGSTLGT   |
|                         |                     |          |            |                            |                       | SAGFSGGLSTSDGFGSRPNASFDRG<br>LSTIIGFGSGSNTSTGFTGEPSTSTGF  |
|                         |                     |          |            |                            |                       | SSGPSSIVGFSGGPSTGVGFCSGPST  |
|                         |                     |          |            |                            |                       | SGFSGGPSTGAGFGGGPNTGAGFG  |
|                         |                     |          |            |                            |                       | GGPSTSAGFGSGAA\SLGACGFSYG   |
| 4621                    | 10118               | A        | 4920       | 3                          | 1380                  | NMLGKYL*VKDQTKIPIKRSHMLR  |
|                         |                     |          |            |                            |                       | DVIQEYDEYFPKIIERASYTLEKKFR  |
|                         |                     |          |            |                            |                       | VNLKEIDKHSSSYILISTQESSAGILG   |
| ĺ                       |                     |          |            |                            |                       | TTKDTPKLGLLMVILSVIFMNGNKA   |
|                         |                     | 1 1      |            |                            |                       | SEAVIWEVLRKLGL/RPGV*LGSLSA  |
|                         |                     |          |            |                            | i                     | CCPCCPLAREDGPRIASVWWSGGT  |
|                         |                     |          |            |                            | ļ                     | GWGAGLGRGPRVLTCVDDGQMVL   |
|                         |                     |          |            |                            |                       | KLSAVSLLNVLCLF*A*MLDRPSRIP  |
|                         |                     |          | [          | . [                        | ĺ                     | DKEGIWVLNCLLLVAMCSLLSSLH*   |
|                         |                     |          |            |                            |                       | DCPMC*ERSPSMLGKWPLALNLGQ  |
|                         |                     |          |            | Ì                          | {                     | FLICGSWGLIFPNCQG*GIHSFGGSE  |
|                         |                     |          |            | 1                          | )                     | GKLIT\DEFVKQKYL\EYKRVPNSRP<br>P\EY\EFFWGLALPTTETSKM\KVLK  |
|                         |                     | ] ]      |            | ļ                          | }                     | FACRVQKKDPKDWAVQYREAVEM   |
|                         |                     |          |            |                            |                       | EVQAAAVAVAEAEARAEWFQHQH   |
|                         |                     |          |            | Ì                          |                       | WLYLANPAPSNGASSSGPKFYCWL  |
|                         |                     |          |            | 1                          |                       | PAVDPSTGVGFCSGPKHQVASSGGP   |
| 1                       |                     |          |            |                            |                       | STGAGFGGGP\NTGAGFGGGPEHQC   |
|                         |                     |          |            |                            |                       | WLWQVEPPVLVPVAFL  |
| 4622                    | 10119               | A        | 4921       | 1                          | 412                   | TRMGLPDASRRRTCRMDPEGWQE   |
| ĺ                       |                     | [        |            |                            | [                     | AMSSA*GRITLQRLSTG\PEGQGGRE  |
| 1                       |                     |          |            |                            |                       | KVGPEGGSENPQQPKAAGVLSKHL  |
| Ì                       |                     |          |            |                            | 1                     | PGAPAQPPQRPPSSPPPLAGPLTERV  |
|                         |                     |          | ļ          |                            | }                     | EKVCDFLDAAGDYLN/GTPG*PSPG   |
| 4622                    | 10100               | $\vdash$ | 4000       | 116                        |                       | ESPAAQDPPVPPWPP   |
| 4623<br>4624            | 10120               | A        | 4922       | 117                        | 295                   |   |
| 4624                    | 10121<br>10122      | A        | 4923       | 1                          | 3564                  | L DOLDAN WOODWAY TO THE TOTAL |
| 7023                    | 10122               | A        | 4924       | 1                          | 355                   | LPGIEVLWQGPKVVSKEIPVESIEEV  |

| SEQ ID<br>NO: of        | SEQ ID<br>NO: of    |   | SEQ ID NO:<br>in USSN | Nucleotide<br>location of              | Nucleotide<br>location of last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible   |
|-------------------------|---------------------|---|-----------------------|--|--------------------------------|---|
| nucleo-tide<br>sequence | peptide<br>sequence | đ | 09/770,160            | first codon<br>for peptide<br>sequence | codon for last                 | nucleotide insertion)   |
|                         |                     |   |                       |  |                                | CKSIKRAPVIWDTIHVN/DF*SALTP YQIVTTKFYFRIKKIVHWGPFPHSSQ KILSICEKYQWLSVPLTHNLTKFLSII VNYSRYHCIKPQLV  |
| 4626                    | 10123               | A | 4925                  | 3                                      | 3145                           | AAAEGELGAWRGNSGRPKIIGRAA EAENEDRTLGRLLPGNERSQPRSPL MLLAPQLKAEAAADKGLAPVPPF SSGHSGPCEREGEGQRGRGRSRRG AHLELKPSPGLRAGAPTDRGRGGP AEVAAAGGRRMVQKESQATLEERE SELSSNPAASAGASLEPPAAPAPGE DNPAGAGGAAVAGAAGGARRFLC GVVEGFYGRPWVMEQRKELFRRLQ KWELNTYLYAPKDDYKHRMFWRE MYSVEEAEQLMTLISAAREYEIEFIY AISPGLDITFSNPKEVSTLKRKLDQV SQFGCRSFALLFDDIDHNMCAADK EVFSSFAHAQVSITNEIYQYLGEPET FLFCPTEYCGTFCYPNVSQSPYLRT VGEKLLPGIEVLWTGPKVVSKEIPV ESIEEVSKIIKRAPVIWDNIHANDYD QKRLFLGPYKGRSTELIPRLKGVLT NPNCEFEANYVAIHTLATWYKSNM NG\VRKDVVMTDSEDSTVSIQIKLE NEGSDEDIETDVLYSPQMALKLALT EWLQEFGVPHQYSSRQVAHSGAKA SVVDGTPLVAAPSLNATTVVTTVY QEPIMSQGAALSGEPTTLTKEEEKK QPDEEPMDMVVEKQEETDHKNDN QILSEIVEAKMAEELKPMDTDKESI AESKSPEMSMQEDCISDIAPMQTDE QTNKEQFVPGPNEKPLYTAEPVTLE DLQLLADLFYLPYEHGPKGAQMLR EFQWLRANSSVVSVNCKGKDSEKI EEWRSRAAKFEEMCGLVMGMFTR LSNCANRTILYDMYSYVWDIKSIMS MVKSFVQWLGCRSHSSAQFLIGDQ EPWAFRGGLAGEFQRLLPIDGANDL FFQPPPLTPTSKVYTIRPYFPKDEAS VYKICREMYDDGVGLPFQSQPDLIG DKLVGGLLSLSLDYCFVLEDEDGIC GYALGTVDVTPFIKKCKISWIPFMQ EKYTKPNGDKELSEAEKIMLSFHEE QEVLPETFLANFPSLIKMDIHKKVT DPSVAKSMMACLLSSLKANGSRGA FCEVRPDDKRILEFYSKLGCFEIAK MEGFPKDVVILGRSL |
| 4627                    | 10124               | A | 4926                  | 3                                      | 251                            | HERHELQMLVDAPCSDLAQELRQS<br>CATVQRLQHTLQQVLD/Q/REEVRQ<br>SKQLLQLYLLALYNEVSLLS*QDIF<br>NVALDVCMCRS   |
| 4628                    | 10125               |   | 4927                  | 1                                      | 408                            | GTSLNSLSKTKAKDLFIGDVIHNAG PHRDKKLKYYIPEVVYSGLYPPYAG GG\GFLYSGHLALRLNHIADSVQF*P R*DPYTVR*LLKPSSAGYDPTFVLLI GTDGIYTYTPSSCENGLGSCEEPHL MSFRSYFHG   |
| 4629                    | 10126               | A | 4928                  | 187                                    | 378                            | LCQKTMSLFTHSFCFSVGRNMEGV  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |     | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|---|--|--|
| 4630  | 10127                                   |     | 4929                                | 26  | 121  | LMDVDCESVYPIV*ASN*GLASAEV<br>GGSFEPRSLRPAWAT   |
|   |   | A   |                                     |   |  | PDRTMGG\REQRQSPGAQRTFFQLL<br>LSFFVES   |
| 4631  | 10128                                   | L A | 4930                                | 3   | 867  |  |
| 4632  | 10129                                   | A   | 4931                                | 1   | 558  | EVRVKCVKALKG\LYGIP\DLTACL<br>KLFTGRFKDWMVSMIMDREYSVA<br>VEAV\RLLILILK\NMEGVLMDVDCE<br>SVYPI\V*ASI*GLASAVGEFLYWKL<br>FYPECEIRTMGGREQRQSPGAQRTF<br>FQLLL\SFFVESKSHFVTQGGGSGQF<br>SAHRNLCLPGSGNFHVSASRVAGIA<br>GAPPHTWLIYVFFS   |
| 4633  | 10130                                   | В   | 4932                                | 1   | 1617   | MKNGVQWAELAGHDYVLDLVSDL ELLRDFPRQKSYFIVGTEGPAASRG GPKVVFGNSWDSDEDMSTRPQPQE HMPKVLDSDGYSSHNQDGTNGETE AQRGTATHQGQPTMAAVSESDSLG EPAVPHKGLDCYLDSLFDPVLSYGD ADLEKPTAIAYRMKGGGQPGGGSS SGTEDTPRRPPEPKPIPGLDASTLAL QQAFIHKQAVLLAREMTLQATALQ QQPLSAALRSLPAEKPPAPEAQPTS VGTGPPAKPVLLRATPKPLRPAPLA KAPRIPIKPVAAPVLAQDQASPETSL HRDAATVTQMHFLTGQGRLLSLLD DSSLHLWEIVHHNGCAHLEEALSFQ LPSRPGFDGASAPLSLTRVTVVLLV AAGDIAALGTEGSSVFFLDVTTLTL LEGQTLAPGEVLRSVPDDYRCGKA LGPVESLQGHLRDPTKILIGYSRGLL VIWNQASQCVDHIFLGNQQLESLC WGRDSSTVVSSHSDGSYAVWSVDA GSFPTLQPTVATTPYGRACTPVAHD HIDELVRGAVFSEKHFCIEDL* |
| 4634  | 10131                                   | A   |                                     | 1   | 811  | HASAGAGCWHLPGIIEGAAQGKGR GRQVIAVARTADVIIMMLDATKGE VQRSLLEKELESVGIRLNKHKPNIYF KPKKGGGISFNSTVTLTQCSEKLVQ LILHEYKIFNAEVLFREDCSPDEFID VIVG\NRVYMPCLYVYNKIDQISM\E EVDRL\ARKPNSVGSSSCG\MKLNL\ DYLL\EMLW\EYL\ALT\CILHQGRR RDRRARFSQDAIILRKGASVEHVCH RIHR\SLASQFQVTPWVWGAPAPSY S\PQAGGALTH\TMEHEDVIQIVKK   |
| 4635  | 10132                                   | A   | 4934                                | 1   | 431  | QRFPAAFPG\PGARRDAPPHSPPAEC<br>RAHAATWRLKPRPHRPHSLTAPLP<br>VHWAGTTEPLPSPRPATGTESARRC<br>ISGDTSQSFLRLARPCRQPGPS*DRC<br>RPGVVSCLDREEKNAGHWLSMAFS<br>LLWVLATQHCLHPEESLTM   |
| 4636  | 10133                                   | A   | 4935                                | 56  | 252  | GAQERGCPREKHGNAELAEGLVLIL<br>RGRGKPPSASLAGRE*I*SRGPEWK<br>VTVNQTAKAKERTGP  |
| 4637  | 10134                                   | A   | 4936                                | 81  | 896  | CGLVTPACLDPWVGIAPLPDTLIVL<br>RGGGSALLPAPIPPVTLEEKQTLTRL<br>LAARGATIQELNTIRKALSQLNGGG   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|----------------------------|--|--|
|   |   |   |                                     |                            |  | LAQAAYPAQVVSLILSDVAGDPVE VIASGPTVASSHNVQDCLHILNRYG LRAALPRSVKTVLSRADSDPHGPHT CGHVLNVIIGSNVLALAEAPAAGRG TG\YQAVVLSAAMQGWGTPAAHR DDRYQCHGHPPLVPAASVMA*VTF WEFRGGLQGQGQMAEQARLADGG FPLPLRMRTSPSASSAFPCFSLGQPL S   |
| 4638  | 10135                                   | A | 4937                                | 100                        | 332  | NKPQPQLLYRIKLTSTPFHPIQKVGL<br>RQMIDLNIPPRIIKLLEENIK*YLSDL<br>GV\TK*KLTKFNFLKIKHFCSPSSC   |
| 4639  | 10136                                   | A | 4938                                | 692                        | 900  | NKLLWLGAVTPACNPSTLGG*GGQI<br>MRSGVRDQPVQHGE\TWSLLKIQKL<br>AGHGWPAPGSPSCLAGLRQE   |
| 4640  | 10137                                   | A | 4939                                | 87                         | 322  | ARLVQNTGAQLKEVQYKLFFGFLF<br>FE*/QSHSVAQAGYSAVIIAHCNLSL<br>LGSSDPFFSAS*VAGTTGMCQHAW<br>LIFDR  |
| 4641  | 10138                                   | A | 4940                                | 91                         | 356  | GHAFLFGGYYSSSHWPSTYPPHAPV<br>PPPPPS\PPYPSLPPFHSLPPIKPFPLPP<br>/SPPSPPSPSL*SPPTPPPTLLIPSPSPPP<br>ASPPLQ   |
| 4642  | 10139                                   | A | 4941                                | 2                          | 332  | CGGPPGSPDTRGGSLIPQGV*AA\GP<br>MEQVPLVAPSSAIPAVPGSLSGTPSH<br>QPVLGTHTPSCPGLTYIPPPESSELP<br>DCPAPGRQRPCPGQTPLPTPCPPSFI<br>FSKQPRA  |
| 4643  | 10140                                   | A | 4942                                | 637                        | 1560   | VWQLDKSMRAAQPWAPAGGAAGS EWAGLKR\RPLGWSSFSPAAAQSPL ELLGHPQPSPWPSEAPWKACQVSF QGT/RVAASYHNAQHGTERQHSSSC *GLGS*/CNSPTWARLSTHCPQ/HSR NTPRTQHCPHYPPRGLAKRWLCGE GPNPYSHPLREGPLRRRVGRGMGK EVHLFYRAWHSGIHFPS/TPSRTSHQ DSPHLEN*TSPLIDLTPTWAPPMCK RIL*KCTCNSLPQKPSMALQCI*NEI NKTSTTSPT\CLAPH*APATLACSPF LQPAELLPISGTLHVIFHPPRTLFPKS RTGSFLSSPQVSV |
| 4644  | 10141                                   | A | 4943                                | 2                          | 335  | ALHPTLTLDLYFTIYTKIHST*IVDL<br>DVKPKTLKCLEESIR/VKLCDLRLSK<br>ISWILKAQSIEEQTDTWDLKT*NNY<br>SSNGTVKRIKRQVED\WHKVFARRI<br>SDTGLVSRISC  |
| 4645  | 10142                                   | A | 4944                                | 2                          | 345  | FFFFFETESRSVAQAGVQWRDLSS<br>LQAPPPG\SRHSLASAS*VAGTTGVC<br>HHARLIF\VFLVETGFHHVSQDGLN<br>LLTS*SAGLGLPKCWDSEKLFFFFG<br>DKSFRFCCPGWSTMV  |
| 4646  | 10143                                   | A | 4945                                | 178                        | 388  | RREPLHPANLLLFFFFFFEMESPSVA<br>QAGVQWRDLSSLQAPPP\GSCHSPT<br>SLS*VAGRLRNKNCLNPDAW  |
| 4647  | 10144                                   | A | 4946                                | 546                        | 850  | FSVLFYFFESESCSVLQAGVQWRDL<br>GSLQPPPP\GSSHSPTSAS*VAGTTGT<br>CHHTQLIFIFLVETGFHHIGQASLKL   |

| SEQ ID                            | SEQ ID                  | MAG | SEO ID NO.                          | Nucleo 4: 4   | Nucleated   | IA mine said converse (N. 1911)   |
|-----------------------------------|-------------------------|-----|-------------------------------------|---|---|---|
| NO: of<br>nucleo-tide<br>sequence | NO: of peptide sequence |     | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide | Nucleotide<br>location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|                                   |                         |     |                                     | sequence  | peptide<br>sequence   |   |
|                                   |                         |     |                                     |   |   | LTS*FAHLGLPKFWDYRCEPPHPA  |
| 4648                              | 10145                   | A   | 4947                                | 169   | 358   | GNGFLFCTQVEVQGAFL*YLNLLAP   |
|                                   |                         |     |                                     |   |   | GVK\LFSCLTLLKPWDSGTFPTFSFN  |
| 1610                              | 122                     | 1.  |                                     |   |   | FFIYLAEKGFNG  |
| 4649                              | 10146                   | A   | 4948                                | 1   | 145   | ANSAAMPSLGCSASSGLVFWPQGL  |
|                                   |                         |     |                                     |   |   | YLLGVVSVSPLPPTPTTVTFPEQI*LL<br>SPQVSSSPVSEGSSQH\PA*SLRPFHV  |
|                                   |                         |     |                                     | Ì   |   | PRS/SPVSSLQPFAPAKSPGPSATCAF   |
|                                   |                         |     |                                     |   |   | SAPSLSLLTLLASGDSSFWGPGPIQM  |
|                                   |                         |     |                                     |   |   | SAGGSIVMCS*GLVFWPQGLYLLG  |
| 1650                              | 10115                   | 1   | 10.10                               |   |   | VVSVSPLPPTPTTVTFPEQI  |
| 4650                              | 10147                   | A   | 4949 .                              | 1   | 295   | GTSSRLRLHRTDELTAPSIYRSTKST  |
| }                                 |                         | -   |                                     |   |   | LDGSLAANEREPFTLGKKPPFSDKP   |
|                                   |                         |     |                                     |   | •   | SIPAGRSLGEHLPKIQKPPLPPTTER<br>HDWSRRLAGKKPPVPKHGWVP*/R  |
|                                   |                         |     |                                     |   |   | EDDNE*DELTAPSIYRSTKSTLDGSL  |
|                                   |                         |     |                                     |   |   | AANEREPFTLGKKPPFSDKPSIPAGR  |
|                                   |                         |     |                                     |   |   | SLGEHLPKIQKPPLPPTTERHDWSR   |
| 4651                              | 10140                   |     | 4050                                | 110   | 100   | RLAGKKPPVPKHGWVP  |
| 4651                              | 10148                   | A   | 4950                                | 119   | 1036  | HASCLKTQALQECSVGVGGGLPVS  |
|                                   |                         |     |                                     |   |   | PAGPPRCFCPALPAAALALQGTFPA<br>TGG*AWGLSSPDWTFSTKKLVMES   |
|                                   |                         |     |                                     |   |   | ARSHGEGGAQGPATLTGPPGEGAL  |
|                                   |                         |     |                                     | 1   |   | RASQ/PGTAGSELRHRARGPAQICST  |
|                                   |                         |     |                                     |   |   | RTR\PAPWWT*SLPPPGHSRAVGFD   |
|                                   |                         |     |                                     | 1   |   | RCGPASP\GVPVNAAVALPPSTCGE   |
|                                   |                         |     |                                     | 1   |   | ESRLPQEEGGIHMA/PGTPLCSGDCI  |
|                                   |                         |     | l                                   |   |   | CCED*PQSRSGQFGADSL*RAKGGT<br>LPSGPSARRRSPL*ASESASCCRRAS   |
|                                   |                         |     |                                     |   |   | S\GPPAAQGERADSRALGTAPPGEG   |
|                                   |                         |     |                                     |   |   | LALRPTPGGIGTPPAGGSEDISREVD  |
|                                   |                         |     |                                     |   |   | PAKRHGLGA   |
| 4652                              | 10149                   | A   | 4951                                | 2   | 1262  | GSAAGSTYEPSSMRLEALQVLTLLA   |
|                                   |                         |     |                                     |   |   | RGYFSMTQAYLMELGEVICKCMGE  |
|                                   |                         |     |                                     | ]   |   | ADPSIQLHGAKLLEELGTGLIQQYK   |
|                                   |                         | 1 1 |                                     |   |   | PDSTAAPDQRAPVFLVVMFWTMM<br>  LNGPFSRFSA\DSEHPTLQASACDAL   |
|                                   |                         |     |                                     |   |   | SSILPEAFSNLPNDRQMLCITVLLGL  |
|                                   |                         |     |                                     |   |   | NDSKNRLVKAATSRALGVYVLFPC  |
|                                   |                         |     |                                     |   |   | LRQDVIFVADAANAILMSLEDKSLN   |
|                                   |                         |     |                                     |   |   | VRAKAAWSLGNLTDTLIVNMETPD  |
|                                   |                         |     |                                     |   |   | PSFQEEFSGLLLLKMLRSAIEASKDK DVLSTISIVVENGOENBUEVANDIER   |
|                                   |                         |     |                                     |   |   | DKLSTISIYYFNGQENRKEKNWNER<br>EYKLEIPYELCTEVDAINKWTAPWT  |
|                                   |                         |     |                                     |   |   | SQAYNALTSVVTSCKNFKVRIRSAA   |
|                                   |                         | 1 1 |                                     |   | ĺ   | ALSVPGKREQYGSVDQYARIWNAL  |
|                                   |                         |     |                                     |   | ĺ   | VTA\LQKSEDTIDFLEF\NTVSSLRTQ   |
|                                   |                         |     |                                     |   | ļ   | ICQ\ALIHLLKLG/RSASDLPL\MKET   |
| 4653                              | 10150                   | A   | 4952                                | 52  | 720   | LELSGNMVQSYILQSLKSRSIGR   |
| CCOT                              | 10130                   |     | 4734                                | 52  | 730   | KSACDALSSILPEAFRNLPNDRQML<br>CITVLLGLNDSKNRLVKAATSR\AL  |
|                                   |                         |     |                                     |   |   | GVYVLFPCLRQDVIFVADAANAMV  |
| ľ                                 |                         |     |                                     | 1   |   | MSLEDKSLNVRAKAAWSLGNLTDT  |
|                                   |                         |     |                                     |   |   | LIVNMETPDPSFQGRVLWSPALENG   |
|                                   |                         |     |                                     |   |   | YDQALEASKDKDKVKRH\AV\RAL  |
|                                   |                         |     |                                     |   |   | GNLLHFLQPSHI/GKTPHLQKFI*GSL   |
| }                                 |                         |     |                                     |   |   | SRALNFLLF*QKLAMKVRWNACYA  |
|                                   |                         |     |                                     |   | 1   | MGNVFKNPALPLGTAPWTSQAYNA  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  LTSVVTS   |
|---|---|---|-------------------------------------|---|------------------------------------|---|
| 4654  | 10151                                   | A | 4953                                | 3   | 363                                | HELEFEIKNTIPFILAP/N/NIKYLGIT/<br>LTKYVLYLN/DLYAENYKTLMK*IR<br>DLNGDPLSCKVKNLIKINKYMK\EIL<br>CSRIGKDSNIV*VSLLPQL\ACRLNAI<br>PIKIPANHFVEVN*LILKFI   |
| 4655  | 10152                                   | A | 4954                                | 179   | 438                                | ENIMSKTSTENCTKQCHFWHVNI*Y SIFFFFLRQSL/DSVTQAGVQWRHLG SLQAPPPGFTPFSRFSLPSSWDYRCP PTSLANFFCILVETGF\TVLARMVSIS *PRAPPASAS*SARCKLHLPGSHRSP ASASPVAGTTGARQQAWLIFFVF  |
| 4656  | 10153                                   | A | 4955                                | 1   | 264                                | QFPKPSPRGP/TPTKSLFHILSPPNQ*I<br>SPPP*QLPPSLYQIPPTIRLSPLPLAES<br>PSPLSVGLGGPLGWVGQLLCLSFPG<br>GPKHVEV  |
| 4657  | 10154                                   | A | 4956                                | 3   | 369                                | HERHELVKEFNKVSGYKINAHKSV<br>ALLYTN/DDQAENQIKSSTPFTIAAK<br>SVK/YLGIYLTKEVKDLYKENYKTL<br>LKEIVDNTNKRKHIP*P*MGRINIVK<br>MTTLPKAIYKFNSMPIKISPSHFG   |
| 4658  | 10155                                   | A | 4957                                | 2   | 338                                | GCWDN*ISTCKRMKLDCSLMLHMK<br>INSM/WIKDVNIKSSSYEK\NIGVNLP<br>DNVLGNGFINMMPKAQASKEKIIN<br>WDSAKLK/IRK*RQLTEWEKLCANP<br>IYSHLIPVLCYLYLV   |
| 4659  | 10156                                   | A | 4958                                | 42  | 447                                | IELVTVLQFYRAFYLFERYAGFLFY YYFLFFVEIRFHYIFQAGLS/ELLGSS DPPTSGLPKCWDYRR\DHRTWPDM QDFLMFHIFPKLFSFPDMCFLASE*P SANTWLLLVVQSSFSLLSHTYHPPG KASTLWFSA   |
| 4660  | 10157                                   | A | 4959                                | 377   | 1220                               | FRKVVPLAESHPAVPG\GKVRTSRS PKSPPRALPT*/PGLFNPGCQRETPSP LG/PPGQHP/VPGQLNSKRKQIPHNE LVEQTLRSGLTSAQPAHPTGGYSCS KLRPGPLPNPNGLCRCSDGRIPGDR EPLALSRT*IHLRACTGPDAAAQVL PGLLPCPPHLPPHLSGMFDSWLAPP LPDPCQRPTPPQAPSSEANNQRSQA PGCGPHSLRDSELQGQCPGPAQAFC RGSGLFQLTQLTGPLHGTR*RLSPK NSQALKPHM*AVGRILHWPPAARP GNSGRYPDD |
| 4661  | 10158                                   | A | 4960                                | 3   | 353                                | HEVPAKGPRPHLTDCPTTQDFLPGF<br>SPRPASGPPPPSLSLRLFQQPG*TVW<br>SPGPPCPVVPDCTSASGQVPFLPPAF<br>RFKNVF*PSRPSPGTRGGP/PP*VCTS<br>R/PLP*TSEPQPQPG   |
| 4662  | 10159                                   | A | 4961                                | 301   | 343                                | TRMAHFWS*STKPSPMGPIQWSHM PGAFSE\SSSCHSHSAFLPPYFSHGPS NRPPIRALCRNLPLPLPNKPRAPSAA DEDNSLNVEWYVPYITRPQA*AALI KINQDGTFLVRDSSKK  |
| 4663  | 10160                                   | A | 4962                                | 2   | 319                                | ARGPGPSGKSGARSGLGNTPRRGG<br>AGLGRVPWSLCY*EGVESGRPEGA<br>GPGTSPGVGFIGAYHGRGVTKVGG  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | LPG/GQACGVWSDPKSPGEPVEPIPG<br>GSWPPQREP  |
| 4664  | 10161                                   | С | 4963                                | 109   | 372  | MQAWINIRKSVYVIHCVNKIKXXX<br>XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 4665  | 10162                                   | A | 4964                                | 3   | 990  | RTLRECYK/HI*ANELNNLDEMSKL KDA/TLLQLTQEEIETLKYNNEIE*I M/NKLPTKKSPGPHGFTG*FYQMFQ EEFTPILSRL**KIKEEGTVPNLLYEV /SIIMIPKPDKDITRPVSLMIIGAKIFK QNI*HTQVYAHIHRIV\YHDHNGFM QAWFNI*KSVYVIHCVNRIKDKNH MIVSIGA/EKAFDKIQHPFMVKTKT QERTF/FILLKGIY/NKPMADIPNGKK LKA\LPLRSGTRRVPDRFWKWQ/CP LPLLFSIVLEVLARAVRQEKEIKGM QIRKVVKLFTDGMILYVEKSKESTI KTSKLINRFNKGSEYKANIKK*VVF L*SSNQQTK |
| 4666  | 10163                                   | A | 4965                                | 3   | 314  | HENDSNPETDNRQEGPSQENIGRVS<br>D/MAFVPSAWTASGGVAWGNPGES<br>GSRTGGVRAETLAPRLQV*PAHLIG<br>HPRSNRGQGRPPWKAGKLGKCQEV<br>LFRFAAF  |
| 4667  | 10164                                   | A | 4966                                | 2   | 329  | ARGEECRKAFRCIYDCVIHE/CEECR<br>KAFRCIYDCVIHERIHNGEKLYEC*E<br>CETSLSSNSVLIQHQRIHTAEKPYEC<br>NECGKAFHRTSVFLQHQRFHTGEQ<br>LYKCNECWKTFRCSSRFIVHQRIHN<br>G*KPYECNECGKAFHRTSVFLQHQ<br>RFHTGEQLYKCNECWKTFRCSSRFI<br>VHQRIHNG   |
| 4668  | 10165                                   | A | 4967                                | 61  | 533  | WTEPVRHPDIHSQKREPSLMPPTVT<br>GPGTTNMLFQPHRGPEKSRVPLHSS<br>SSSSSSSSSSSSSSSSSKTF/FGAPK/LP<br>PSAPTSPDLAQAS*GLKSWKPWSGE<br>RRFGCSKQRRALPTAS*FQGQSHAA<br>PETPSYVGQDQSPSPGG*RPSTSPEG<br>DSCFP   |
| 4669  | 10166                                   | A | 4968                                | 22  | 482  | GKGPGPPGGVCKSTLPPAKPWRGPP<br>HLPLPLGL*EKALPRALGQWEGRES<br>FWDQPGKLPLQN/PPRSLGVAMGT<br>QAVEIPDGRLPDLSPTPAHSFSFLAL<br>KPLLGEARVHFRASAWPLPTRAWT<br>LDLPQLGWGFWDCMALALESRSSG<br>ESPSLL   |
| 4670  | 10167                                   | A | 4969                                | 146   | 1299   | GAPGPWPTGTTWLPGAAGAVPDPG<br>FLLPSSAALSRSTAS*FSQPPPVPPAL<br>TVPWPRCGC*TSCPAVPQPSP/GLPR<br>TLVPACRGLPLSSVPSSPASRPKLPL<br>HSPSSWSIPPEGSWGPLPTTLPLPWG<br>L/PRLQSREHKPALSAATWQGLVVD<br>PSPHPLLAFPLLSSAQVHF*PGLRSW<br>VGPFFGLRKQP*HTGLSSLTTGCCP<br>AWLTSWPRISQSERKAHP*CLPL*Q<br>ALSPPISYFNLTVDLRNRDYHSASSS<br>SSSSSSSSSSSSSSSSSRLSWSPKHHPL                               |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|------------------------------------|---|
|   |   |   |                                     |   |                                    | LPSFILSWPQGIPRGLKNPGKTRGGL<br>GWWKKGFLANWLSKKPRRKKGPS<br>FPPLVL*FQGPRALPVPRNPHPKLG<br>ASSQSPSPWWGKRPKPKSPGNGTS<br>WLPPK   |
| 4671  | 10168                                   | A | 4970                                | 298   | 954                                | QVQGHEDFLGARNTTLCSSFSCPGP<br>GILGAEILETVGWCEKVCMLRAEK<br>GSPHCFVIPGPEPCSPRNPNLAGAGP<br>ESKPWWVEAKQKP*SGLLLPLVVFS<br>VPRS*NCEPGVGERSGRG\HLGFLQP<br>GYP*PHQGFWEILQGQLSRLFPNSSL<br>PPH/MPLKPQQKSHSSHKQKGRGKN<br>EEKTLCQVICRQRMGLVP*QHPTPC<br>GAPPSPHHPQTPPKQVPYL   |
| 4672  | 10169                                   | A | 4971                                | 4   | 410                                | PIERPHELKHRLPHVQKLVEDVGDG<br>VIPAALEEGQAGWSHGFLVFLVEIK<br>SAEGP/PGPADSRVRGVRPQRSQSA<br>GPA*RAGRQDGVCRSLGQGRGGGR<br>ATSLVLHPPGYPGCWFSVGVPSLPQ<br>YTGIRSSSPRTRG   |
| 4673  | 10170                                   | A | 4972                                | 148   | 268                                | LQPR*PLTCAPPPCPVQTQTHPISVS<br>QTLLGLEFCCSLSL  |
| 4674  | 10171                                   | A | 4973                                | 397   | 1449                               | RSHPSGTGRRTSRLESWFLGVSCKK SKVREGPLGPA**AG*RGVRPQRSQ SAGPA*RAGKRQDGG/SPEPRAGVG GEVGTQSP/GPSGASGYPGMLVSKP VGGTSASWLPAGCPIPS*LS*QRSQG SPSSCLIGHLLALWAAFGLGVTSLP QYTGIRSSSPTA*ATVQGDSGHKGG TGGTGLGRGRNTQPDAACGRGHRS SPTR/RPHGNPNGNTGCAEGGQARS LLPKLAPKLPGWPVSVPVAVG\PGD FGWRQAQYQSSLWDLSSPRNTLGR SATSAGPAPPALLGAGSGRSSGTSP AAPGCSSRCHCWASAPAGVSGGPG\ GRGAEAPPSPTLAQRGSPPG\AAIFP PACGIPP |
| 4675  |   | A | 4974                                | 2   | 637                                | ARAKEV*DLYTERTK/PLLKEIKEDR NKWKHTSCLWIARLNIVKMSILCKL VHRLSAITIKI/PCWLCLAEIDKLILK/ FIWKFK/RSRVAKTVLKKKRKVRRL TLSNFKTYYFRVTVIKIEWLWQKD KYIDQWNRIKSLEINSYICGLLIFYK SAKTIS*ENSVSWYLDNWIPTCERM KLAPYIIYKKIK\WIKDLNIRAITVKL IKENIGPGARL   |
| 4676  | 10173                                   | A | 4975                                | 254   | 590                                | KARYILPDLMIGLDFFFFFLGETKFP<br>FAPQPGGHQGDLG*LKLTPPRDFP/C<br>LTPPRSGNYRLGPPPPLNFFVF*KKR<br>GGPHVGQTGFELLT*KDPPPLASQR<br>AEITGGTHHA   |
| 4677  | 10174                                   | A | 4976                                | 103   | 378                                | CFLYSICRGADTQRRFKLSDLSINST<br>ECLHVHCRGLEISLADCAYT*ILTK<br>GNHNPLS*YTFMRN\AKQPVN*YHR<br>CTETFSLTRMELLVSV  |
| 4678  | 10175                                   | A | 4977                                | 2   | 327                                | RQCLALWPRLECSGVIIAHHSLHLL<br>GSSDPPTSAS*VAGTTGMHHHAQLI/<br>LFWVLIDTG*CYVAQTGLEPLNSGH  |

| SEO ID      | SEQ ID   | Me      | SEQ ID NO: | Nucleotide  | Nucleotide          | Amino goid saguenes (V-University Sta   |
|-------------|----------|---------|------------|-------------|---------------------|---|
| NO: of      | NO: of   |         | in USSN    | location of | location of last    | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide  | đ       | 09/770,160 | first codon | codon for last      | nucleotide insertion)   |
| sequence    | sequence | 1       | [          | for peptide | amino acid of       | ,   |
|             | l        | -       |            | sequence    | peptide<br>sequence |   |
|             |          |         |            | <b></b>     | sequence            | PPTSASQSAGIIGLRHRAQPCVFQSS  |
|             |          |         |            | 1           |                     | QKRGPELF  |
| 4679        | 10176    | A       | 4978       | 19          | 1009                | KTTQQQQNLFFSSAHET\FTNTDHIL  |
|             | ļ        |         | ]          | )           |                     | GHETSFDMF*HIQVI*STFLYHNVIK  |
|             |          |         |            |             |                     | LEVNSRKISGKCPNMWKLNNTVLS  |
| ĺ           |          |         |            | [           | 1                   | NTKIINFLDNKQNETIKI/RAETNELE   |
|             | ļ        | İ       | Ì          | ĺ           | ĺ                   | NR/RTEKIN*TKM*FFEMINTIDKSL  |
|             |          | 1       | 1          | 1           | 1                   | AR*SRGKRHKLLISGMTNVVSHCVS   |
|             |          |         | ł          |             | }                   | LPTLFLFQSCFDYILTTLHFLINF/QN   |
|             |          |         | ]          | ]           |                     | RFNNLYKMIRGY*QLYKN*FDKLH  |
|             |          |         |            |             |                     | EMKNFL*/RY*LPILTQEEI/S/HLNSPI   |
|             |          | 1       |            |             |                     | YILKIEIVVLNLPTNKTYW*TLKF/EE   |
|             | •        | 1       |            | 1           |                     | MIPIVHRLFQKQETLPNPFYEVSITPI   |
|             |          |         |            |             |                     | PKI/QD/D*TKENFRPISL\VDAKIPSK<br>NLSNYICSRLNNASHPQRSTDPNLQ                                 |
|             |          | -       |            |             |                     | NF  |
| 4680        | 10177    | A       | 4979       | 3           | 358                 | STSNAYHSNSLHQQIKEKKNHTILSI  |
|             |          | 1       |            | }           |                     | DAEKAFYKIQEPLLAITL*NRNSGN/  |
|             | ]        |         |            | ]           |                     | FLNMLMTTY**PKVNVILIGNTIPY*  |
|             |          |         |            |             |                     | YFAFLLP*KLRTRQSRLSSLFNIVLK  |
|             |          |         |            |             |                     | NPANVTVISINIKRK   |
| 4681        | 10178    | A       | 4980       | 3           | 341                 | FFETESNSVAQAGVQWHDLGSLQP  |
|             |          |         |            | 1           |                     | PSPG\SSNSPASASRVAGITGACPNV  |
|             | ]        |         |            |             |                     | QLISVGFLFFVFWFFFETESLSVAQA  |
|             |          |         |            | ] ]         |                     | TGVQWVRSWAYCNLRLPGSGRFLC  |
| 4682        | 10179    |         | 4001       | (50         | 1001                | LCLPSSWGLQGVR   |
| 4082        | 10179    | A       | 4981       | 658         | 1001                | LILSARPPKGEKGSFLLAEFSSYFHS  |
|             |          | 1 1     | ı          | 1 1         |                     | GLFSSARSFFFFFFFFETESHCVAQA  |
|             |          | 1 1     |            | 1 1         |                     | GVQWLDLGSLQPPPPG\SSNSPASAS  |
|             |          | 1       |            |             |                     | QVAGTTGVCHHAQLIFVLLVETGF<br>HHVGQAGLELLTS   |
| 4683        | 10180    | A       | 4982       | 53          | 394                 | PQQSGFWFIYFSKQGCPFFVNILNIC  |
|             |          | ]       |            | ] 55 ]      | 27.                 | SFVLFFFFETESCSVAQAGVQWHDL   |
|             |          |         |            |             |                     | GSLQPPPPG\SSDSPASASRVAGITG  |
|             |          |         |            | 1           |                     | ACHQTWLIFVFLVDMGFRHVGQAS  |
|             |          |         |            |             |                     | LKLLTSGFKKWVT   |
| 4684        | 10181    | A       | 4983       | 66          | 516                 | HFYQFFPHFSGRMDLWSSLLCHFF  |
|             |          | 1 1     |            | 1           |                     | MTSQFVTFVFLLYFIFVVYILSV*LD  |
|             |          | 1 1     |            | ]           |                     | F*MRKQT*LISG*ASI*YRYV*LQNL  |
|             |          | ] [     |            | ] ]         |                     | YVLKLYITPLSL*AHVLIYL/CYLKS  |
|             |          |         |            |             |                     | ESHSVTQAGVQSHNLSSLPPRFK*FP  |
| 4685        | 10182    | -       | 4094       |             | 201                 | CLSLPNG*DYRNVPPHPANFCIS   |
| 4005        | 10162    | A       | 4984       | 3           | 324                 | HENRMKYEISINMWKLNNIFLNKL  |
|             |          | 1 1     |            | 1           |                     | WVKEITSRLQKYFECSENKTTTYQK   |
|             |          | 1 1     |            |             |                     | L*DAK\KMNQCQGYLWVFMALSA*<br>ISKRKRLLINYLSFYLSKLEK*EPTK                                    |
|             |          | 1 1     |            |             |                     | PKASSRKVV   |
| 4686        | 10183    | A       | 4985       | 108         | 277                 | ARVIRRANFCIFGKDRVSPCCPG/W/  |
|             |          |         |            |             | ~                   | SPELPGLKRSPSLSLPKCWDYP*AT   |
|             |          | 1       |            | [           | ĺ                   | APGQHPYS  |
| 4687        | 10184    |         | 4986       | 29          | 454                 |   |
| 4688        | 10185    | A       | 4987       | 116         | 424                 |   |
| 4689        | 10186    | Α       | 4988       | 1           | 1217                | PPTTCTPACQGLSGAAMKSLVLLLC   |
|             |          |         |            | 1           |                     | LAQLWGWHSAPHGPGLIYRQPNCD  |
|             |          |         |            | ]           | j                   | DPETEEAALVAIDYINQNLPWGYK  |
|             |          |         |            |             |                     | HTLNQIDEVKVWPQQPSGELFEIEID  |
| 1           |          | <u></u> |            |             |                     | TLETTCHVLDPTPVARCSVRQLKEH   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | AVEGDCDFQLLKLDGKFSVVYAKC D\SSQDSAEDVRKVCQDCPLLAPLN\ DTRVAHAEKAALAAFNAQNNGS\N FQLEEISR\AQLVPL\PPS\TYV\EFTV SG\TDCVAK\EATEAAKCN\LLAEKA IMAFVKATLK*ESLGGGRRLQLTCT VF\QTQPCDLHSPNPEGANEAVPTP VV\DP\DAPPSPPLG\APG\LPP\AGSP PELPCFYWAAPPG\HQ\LHR\AHY\D LR\HTFHGVWVFIGGHPSGRKCSHP PGKHGTVGSSLVFWCCCCLGPVVP SIVPG\RIRHFKVLG   |
| 4690  | 10187                                   | A | 4989                                | 1   | 443  | KKFVIPDFEEFTGHVGRIFEDVKELT<br>GGKVAAYIPQLAKSNPDLWGVSLC<br>TVDGQRHSVGHTKIPFCLQSCVKPL<br>TYAISISTLG/DYVHKFVGKEPSGLR<br>YNKLSLNEEGIPHNPMVNAGAIVVS<br>SLIKMDCNKAEKFDFVLQHLNKK   |
| 4691  | 10188                                   | A | 4990                                | 3   | 217  | ATKRKKKMKDKDKA\KLLEAMGTS<br>KTNEEDKRRGLDKRTPDQAAFEKM<br>QEKRDFSRHLDTLTEHYDIPKVHH  |
| 4692  | 10189                                   | A | 4991                                | 3   | 475  | AASTESGMVAYYQVQKGPLKLKG<br>VAKLGVTK/RVRPEGPRDSVFIPLKP<br>FLGTPGPDPPTRRLLMFFSRKKKKK<br>DKDKAK\LLEAMGT\SKKN\EEEKR<br>RGL\DKRTPAQAAFEKMQEKRHME<br>RILMKA\SKTHKQRVEDFNRHLGTL<br>\TEHY\DIPKV\TWTK  |
| 4693  | 10190                                   | A | 4992                                | 783   | 5158   | PDKSGRRRDVEGGVCCFLSLLRNSR YLLSTHILERGKKASLCHPGWNAL VPSPLTAASASWVQVILLPLSLPSG WDYSLLHLEELTGESPTSERAFNYH PTTCLRRKILQDSEHTASTRGPMTL DRPGEGATMLKTFTVLLFCIRMSLG MTSIVMDPQPELWIESNYPQAPWE NITLWCRSPSRISSKFLLLKDKTQMT WIRPSHKTFQVSFLIGALTESNAGL YRCCYWKETGWSKPSKVLELEAPG QLPKPIFWIQAETPALPGCNVNILCH GWLQDLVFMLFKEGYAEPVDYQV PTGTMAIFSIDNLTPEDEGVYICRTH I\QILP\TLWSEPSNPLKLVVAGLYPK PTLTAHPGPIMAPGESLNLRCQGPIY GMTFALMRVEDLEKSFYHKKTIKN EANFFFQSLKIQDTGHYLCFYYDAS YRGSLLSDVLKIWVTDTFPKTWLL ARPSAVVQMGQNVSLRCRGPVDG VGLALYKKGEDKPLQFLDATSIDD NTSFFLNNVTYSDTGIYSCHYLLTW KTSIRMPSHNTVELMVVDKPPKPSL SAWPSTVFKLGKAITLQCRVSHPVL EFSLEWEERETFQRFSVNGDFIISNV DGKGTGTYSCSYRVETHPNMWSHR SEPLKLMGPAGYLTWNYVLNEAIR LSLIMQLVALLLVVLWIRWKCRRL RIREAWLLGTAQGVTMLFIVTALLC CGLCNGVLIEETEIVMPTPKPELWA ETNFPLAPWKNLTLWCRSPSGSTKE |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   | sequence   | FVLLKDGTGWIATRPASEQVRAAFP LGALTQSHTGSYHCHSWEEMAVSE PSEALELVGTDILPKPVISASPTIRGQ ELQLRCKGWLAGMGFALYKEGEQ EPVQQLGAVGREAFFTIQRMEDKD EGNYSCRTHTEKLPFKWSEPSEPLE LVIKEMYPKPFFKTWASPVVTPGAR VTFNCSTPHQHMSFILYKDGSEIASS DRSWASPGASAAHFLIISVGIGDGG NYSCRYYDFSIWSEPSDPVELVVTE FYPKPTLLAQPGPVVFPGKSVILRC QGTFQGMRFALLQEGAHVPLQFRS VSGNSADFLLHTVGAEDSGNYSCIY YETTMSNRGSYLSMPLMIWVTDTF PKPWLFAEPSSVVPMGQNVTLWCR GPVHGVGYILHKEGEATSMQLWGS TSNDGAFPITNISGTSMGRYSCCYH PDWTSSIKIQPSNTLELLVTGLLPKP SLLAQPGPMVAPGENMTLQCQGEL PDSTFVLLKEGAQEPLEQQRPSGYR ADFWMPAVRGEDSGIYSCVYYLDS TPFAASNHSDSLEIWVTDKPPKPSLS AWPSTMFKLGKDITLQCRGPLPGVE |
|   |   |   |                                     |   |  | FVLEHDGEEAPQQFSEDGDFVINNV<br>EGKGIGNYSCSYRLQAYPDIWSEPS<br>DPLELVGAAGPVAQECTVGNIVRSS<br>LIVVVVVALGVVLAIEWKKWPRLR<br>TRGSETDGRDQTIALEECNQEGEPG<br>TPANSPSSTSQRISVELPVPI  |
| 4694  | 10191                                   | A | 4993                                | 1   | 369  | GTFQLPKPIFWIEAETPALPGCNVNI<br>LC\HGWLQDLVFMLFKEGYAKPVD<br>YQVPTG\TMAIFSIDNLTPE\DEGVYI<br>CRTHIQMLPTLW\SEPSNPL\KLVVA<br>GGCGLWLLASGNCCPRYHGWLS  |
| 4695  | 10192                                   | A | 4994                                | 183   | 429  | ISIKSMKLISDYKYCIYIYRYHRDVI<br>RLGIIDIYSVLHPTSAQYTFFSSLHGT<br>LTTRDNILGHKT\LNKFKRIEIRQYL<br>FSDQ  |
| 4696  | 10193                                   | A | 4995                                | 2   | 270  | TSGCLQGSCC\TGPPGAVGRASRSR PSTRPPSRARPLGSPGCSARAQDAA DLPLPPPPPPCCSPSSAGCRCSLGCF RRCPLRSSRRSRF   |
| 4697  | 10194                                   | A | 4996                                | 1   | 428  | NPCLSERQGCCEKLPLERSSTPQDS AGHPVT/HAHCSLPSPVDLCPLLLAT HRISCWHCQDEVQGGTD\SADTGD LEALSLLAGHGDTDGHIILDVPDGA PYPQRTKAGIDHLHQKILKIIEQITIE HEARDDNAPDYPKLANN  |
| 4698  | 10195                                   | A | 4997                                | 131   | 412  | RKWLKLLPCSFFSSKNIYAETFSPCV<br>CIRVCIHVCVYTCVYTCVCIHVCSC<br>PC/VGQASALKSVSLCQLHCILVLTP<br>MLTLRFDKKFFTQDSHFI  |
| 4699  | 10196                                   | A | 4998                                | 2   | 175  | KFTWKHKGPRIARN\ILKRKIKVEGF<br>TLPNFKTYYKAAVTETVWYWHKD<br>SGLDHFVLL   |
| 4700  | 10197                                   | A | 4999                                | 2   | 175  | KFTWNHKGPRIARNNLEKEN\KVEG<br>FTLPNFKSYYKAAVTETVWYWHK<br>DSGLDHFVLL   |

| SEQ ID                  | SEQ ID              | Me            | SEQ ID NO: | Nucleotide                 | Nucleotide                      | Amino acid sequence ( X=Unknown; *=Stop   |
|-------------------------|---------------------|---------------|------------|----------------------------|---------------------------------|---|
| NO: of                  | NO: of              | tho           | in USSN    | location of                | location of last                | codon; /=possible nucleotide deletion; \=possible                                 |
| nucleo-tide<br>sequence | peptide<br>sequence | đ             | 09/770,160 | first codon<br>for peptide | codon for last<br>amino acid of | nucleotide insertion)   |
| sequence                | sequence            |               |            | sequence                   | peptide                         |   |
| 4701                    | 10100               | <del></del>   | 5000       | <u> </u>                   | sequence                        | A W D V G V G D D D C C V D D D C C V D D D C C V D D D C C V D D D C C V D D D D |
| 4701                    | 10198               | A             | 5000       | 1                          | 909                             | MVLEVSVSDRDAVWRLWRAPIGES  |
|                         |                     | }             | }          |                            |                                 | QQRSLGFWSKVLPYSADNYFPFER<br>QLLACYWALLETDRLTVGHQVTLQ                              |
|                         |                     | 1             | l.         | 1                          |                                 | PELPIMNWVLSDPSSHKVGHVHQH  |
| ļ                       |                     |               |            |                            |                                 | SIIKWKWYIRDQTRAGPEGTTTPVIT  |
| 1                       |                     |               |            | 1                          |                                 | Q/WDAHEQSGLSGRDG\KGQRFVLT   |
|                         |                     |               |            |                            |                                 | GVDTYSGYWFAYPAHNASAKTSIY  |
|                         | ł                   | 1             |            | 1                          |                                 | GFTECLIHCHGIPHSIASDQGTLFTA  |
|                         | [                   |               |            |                            | 1                               | KEVWQWAHAHGIHWSYHIPHHPIA  |
| ]                       | ]                   |               | ]          | ]                          |                                 | AGLIEWWNGLLKSQLQCQLGDNTL<br>QGWGKDLQKAMYSLNQRLIYSTVS                              |
|                         |                     |               |            |                            | ĺ                               | PISRIHGSRNQRVEVEVAPLTITLSD  |
|                         |                     |               |            |                            |                                 | PLAKFFFLLP  |
| 4702                    | 10199               | A             | 5001       | 1                          | 1014                            |   |
| 4703                    | 10200               | A             | 5002       | 349                        | 718                             | AGPEGTTTAECP/I/CQQQRPILSLRY   |
| }                       |                     | 1             |            |                            |                                 | GTISWG/DQSATWWQVDYIRTLLS  |
|                         |                     |               |            | Ì                          |                                 | WKWQSASAKTTIHGLTKCLIHHDIP   |
|                         | ĺ                   |               | İ          |                            |                                 | HSIASD*GTCFMAKEVWQWYCFSH  |
| 1                       |                     |               |            |                            | l                               | SQDSRVQESRGGIGSCTTHHHPCSF<br>PN   |
| 4704                    | 10201               | $\frac{1}{A}$ | 5003       | 1                          | 558                             | FN  |
| 4705                    | 10202               | $\frac{1}{A}$ | 5004       | 1                          | 2205                            | MGAVFEALWQYSPELPKASVMVQ   |
|                         | 10202               | **            | ] 500.     | •                          | 2203                            | EASKAIGQCQSSAAKLRRSGKESVT   |
| }                       |                     |               |            |                            |                                 | EPWARVLGALEMAARLYKVTSGH   |
|                         |                     |               |            |                            |                                 | CHGIHTPSWRCLCFSTGGKERHAH  |
|                         |                     |               |            |                            |                                 | DLPHVTAQSQGHQGQGKISRTALK  |
|                         | ]                   |               |            |                            |                                 | EPTVHKVTASLSPVVATSPPQPMLP   |
|                         |                     |               |            |                            |                                 | SDFPPLSEEINPMLPEATVIASPKEIA<br>RQDNVDSPQEPPPTPQFSSRPITRLK                         |
|                         |                     |               |            |                            |                                 | SQWAPRGPECVIGIDILSSWQNPHIG  |
|                         |                     |               |            |                            |                                 | SLTGRVRAIMVGKAKWKPLELPLP  |
|                         | j                   |               |            | ]                          |                                 | RKIVNQKQYHILGGTVEISATIKDLK  |
|                         |                     |               |            |                            |                                 | DTEAVTPTTSPFNSPIWPVQKTDGS   |
| ļ                       |                     |               |            |                            |                                 | WRMTVDYCKLNQVVTPIAAAVPD   |
| ]                       |                     | ļ             |            |                            |                                 | V/VSLLEQINTSPGTWFEWSPK\KAL  |
|                         |                     |               |            |                            |                                 | QQVQAAVQAALPFGPYDPADPMVL EVSVADRDAIWSLWNAAIGESQRR                                 |
|                         |                     |               |            |                            |                                 | PLGFWSKALLSSADNYSPFERQLLA   |
|                         | i                   |               |            |                            |                                 | SYWALVETERLTVGHQVTLRPELPI   |
|                         |                     |               |            |                            |                                 | MNWVLSDPSSHKVSGAQQRSIIKLK   |
|                         |                     |               |            |                            |                                 | WYIHDWVRAGPEGTTTSVITQWAH  |
|                         |                     |               |            |                            |                                 | EQSGHGGRDGGHAWAQQHGLPLT   |
|                         |                     |               |            |                            |                                 | KADLATATARIHRSRNQGVKVEVA  |
|                         |                     |               |            |                            |                                 | PLTITPSDPLAKFLLLISATSTSLEVT<br>VPEGEMLPPRDTTKIATFGTQTGFL                          |
|                         |                     |               |            | J i                        |                                 | ALQLADGLLWDLVIIPGKGKPSRDL   |
|                         |                     |               |            |                            |                                 | VESPSPYSTYEGIDGWPDEPAPTAT   |
|                         |                     |               |            |                            |                                 | KPPVMPAPALPPDTRSGSKAPTVPT   |
|                         |                     |               |            |                            |                                 | PYPQMEHHQVQLASNNSNTEALGH  |
|                         |                     |               |            |                            |                                 | LSPQSSWVQTPGQNSGPAIPNHLGK   |
| 4706                    | 10000               | 1.            | 5005       | 1.5.                       |                                 | DMISPPQMAPAGVKWESQKY  |
| 4706                    | 10203               | A             | 5005       | 155                        | 531                             | GNLWSVDLRPGTPLRQNFRGTIRQQ   |
|                         |                     |               |            |                            |                                 | HSRFTKNHCSQTPLLIPRQTGSGVD<br>LSKLQQTCS*GSCLVCTIDLANAFFS                           |
|                         |                     |               |            |                            |                                 | LSKLQQTCS*GSCLVCTIDLANAFFS  <br>  IPVHKA/HQKQFAFSWQ\YTFTVLPR                      |
|                         |                     |               |            |                            |                                 | LTWLQPC*VPNLPAAETNTEPSNGT   |
| 4707                    | 10204               | A             | 5006       | 1                          | 518                             | MTVDYCKLNQVVIPIAAAVSDVVS  |
|                         |                     |               |            |                            |                                 | LLEQINTSPGTWYAAIDLANAFFSIP  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|---|--|
|   |   |   |                                     |                         | •   | VHKAQQKQFAFSWQGQQYTFTVLP<br>QWYINSPALCHNLIRRDLDCFSLPL<br>DITLVHYIDDIMLIGSTIKWVVHSS/<br>DSIIKWKWYVHDWARAGPEGTTN<br>GLAG*SGTCKKHEWKTGDKGIRGR<br>G  |
| 4708  | 10205                                   | A | 5007                                |                         | 2592  | MVRKAKWKPLQLPLPRKIVNQKQH RIPGGTVEISAITKDLKDAGVVIPTT SPFNSPIWSVQKTDGCWRMTVDYC KLTQVMTPIAAVVPDVVSLLKQINT YPGTCK\FLGVQWCGACRDI/PSKV KDKLLHLAPPTTKKEAQHLVGLFG FWREHIPHLGVLLQPMYQVTRKAA SFEWGLEQEKALQQVQAAVQAALP FGPYDSADPTVLEMSVADRVAVWS LWQAPIGESQWRPLGLWSKALPFS ADNYSPFERRLLACYWALMETEGL TMGHQVTMQPELPIMNWVLSDPSR HKVGHAQQHSIIKLKWYICDQARA VPEGTC\*LNKEVAQMP/MGTTRKW TAAALQSLSGISLKDSGEGKSSQWT ELQAVHLVVHFAWKEKWPGTWKK HDWKTGDNEIWGRGIWMDCSEWS KTVKIFVSHAHEPSGHGGRDGGYA WAQEHELSFTKADLATGIVECPICQ QQRPTLSPRYGTIPQGQTFILTGINT YSIYGFAYPAHNASAKITIRGLTECL IHHHGIPHS/IVSD*GTHFTAKDV\ET RIHRPRNQGVEVEVAPLTITRSDTL AKFLLPVPTTFRSANLEVLLLEGGT LPPGDPTTIPLNWKLRLPRGHFGLPL PLSQQAKKGVSVLAGVTDLDYQDE FSLLLHNRVTAAFPSLHSSFAYLD NMIEKANKCHVEGVDHVSDPAQRR ECDRHTGSSCHLLRGPPQLQSQLVS GPRSPKSDSGESCLAWDPTFKAEVS PLAQGSPRNSVQEPSPRTGSPKSLLG ALIALWPSWYLSSDPDPQGSNSRNL EISACQKYLSPAFGNSDYSTAEDFN SDYTLKSPENSIGYARLEKHRRLYG GDGGDGGGDDVRGGKRGDDSASR KGVTERV |
| 4709  | 10206                                   | A | 5008                                | 1                       | 942   | MVGKAKWKPLELPLPRKIVNQKQH HIPEGIAEIAATIKDLKDAGVVIPTTS PFNSPIWPVQKTDGSWRMTVDYCK LNQVVTPIAAAVPDVVSFLEEINTSL GTWYAAIDLANAFFSIPVHKVHQKP FAFSWQG/QQYTFTVLPQDYINSLA L*HNLIWRDLDYF\LLLQDITLVHYI DDIMLIGSNDHKVGGAQQHSIIKWK LYIHDQAQTGPEGTTTSVIAQWAHE QSGPGSRDGGYAWAQQHGLPLTK ADLATTTAECPVCQQQRPTLSPRYG TIPSLPLTKALTLQLKKCSSGPMLM EFTGLAMFPIILKQLD   |
| 4710  | 10207                                   | A | 5009                                | 1                       | 1795  | MRKCGKPQFKLGQTNKANSRIQEE<br>LIHSKSLIEQEGEKPVQFSAFHRMW<br>QPADSQCDIIDSADIWADPLVRHREI  |

| SEQ ID                  | SEQ ID              | Me         | SEQ ID NO: | Nucleotide  | Nucleotide       | Amino acid sequence ( X=Unknown; *=Stop                |
|-------------------------|---------------------|------------|------------|-------------|------------------|--|
| NO: of                  | NO: of              |            | in USSN    | location of | location of last | codon; /=possible nucleotide deletion; \=possible      |
| nucleo-tide<br>sequence | peptide<br>sequence | d          | 09/770,160 |             | codon for last   | nucleotide insertion)                                  |
| sequence                | scquence            |            | }          | sequence    | peptide          |  |
|                         | <u> </u>            |            |            |             | sequence         |  |
|                         | 1                   |            |            |             |                  | ITGSGGINRRRTRGGRGGGEAAGG                               |
|                         |                     |            |            |             |                  | AENCGSREERERAGVGTAVTQLQN                               |
| 1                       |                     |            | 1          |             | ]                | LNTIGIIGSRGGRGQVAAINHQRQG                              |
|                         |                     |            | l          |             |                  | GHSYCKGQQKQNSNQNSVTHVEL                                |
|                         |                     | 1          | :          |             |                  | WHWLINHSVPRSEIDRKPTTFLLNL                              |
| 1                       |                     | -          |            |             | 1                | YKQKTSRDLWPFTRVTLHRGKRND                               |
|                         |                     | 1          |            |             |                  | QTFQGLLDTGSELMLIPEDTKHHCG                              |
| ł                       |                     |            |            |             |                  | PPVKVEAYGGQVINGVLAQIQLTV                               |
|                         |                     |            |            |             |                  | GPVGSGTHPVVIYPVPECIIGIGILSS                            |
| }                       | 1                   | 1          |            |             |                  | WQNPHIGSLTSRKTDGSWRMTVHY                               |
|                         |                     |            |            |             |                  | HKLNQMVTPIAAAIPDVVSLLEQVN                              |
|                         |                     | 1 .        |            |             |                  | TSPGSWYAAIDLANAFFFIPVHKAH                              |
|                         | ł                   |            |            |             |                  | QKQFAFSWQGQQYTFTVLPQGETL<br>VNFSLPQDITLFHYIDDIMQIGSSDQ |
|                         |                     |            |            |             |                  | EVANTLDLLPRKSTTPSG/LYGFWR                              |
|                         |                     | -          |            |             |                  | QHIS/HLGLLLTPIY*VTQKAA/SFEW                            |
|                         |                     |            |            |             |                  | GLEQEKALQQVQATVQASLPLGVY                               |
|                         | İ                   |            |            |             |                  | DPADPMVIEM/SLSDPSSHKVGCAQ                              |
|                         |                     |            |            |             |                  | QHSIIKWKRYVCDQA*ASPEGTS*L                              |
|                         |                     |            |            |             |                  | YCTSFIMEKEEVC/LSLEQTLTLDMG                             |
|                         |                     |            |            |             |                  | LPILHAMLLWIHLWIHGLPYPSSWY                              |
|                         |                     |            |            |             |                  | STQQCL   |
| 4711                    | 10208               | A          | 5010       | 3           | 169              | DFQPFTRVTVHWGKGNDQTFRGLL                               |
|                         |                     |            |            |             |                  | DTGSELTLIPGDPKHHYGPPVKVG\                              |
|                         |                     |            |            |             |                  | AYGAQLL  |
| 4712                    | 10209               | A          | 5011       | .1          | 562              |  |
| 4713                    | 10210               | A          | 5012       | 3           | 591              | DPADPMVLEVSEADRDA\VPISESQ                              |
|                         |                     | 1 1        |            |             |                  | QRPLGFWSKALPSSANNYSFFKRQL                              |
|                         |                     |            |            |             |                  | LACYWVLVEIEHLTMGHQVTMRPE                               |
|                         | {                   | 1 1        |            | ľ           | i                | LPIINCVLSDPCSHKVGHAQQHSIIK                             |
|                         |                     |            |            |             |                  | WRWYIHDWAEGTSKLHEEVAQIPM                               |
|                         |                     | 1 1        |            | 1           |                  | VSTPSLPQPAPMASWEVPYDQLTEE                              |
|                         |                     |            |            | į           |                  | EKTRAWFTDGSARHAGATQKWTA                                |
| 4714                    | 10211               | A          | 5013       | 2           | 586              | VALQPLSGTSLQDSSEEKSSQWTEI                              |
| 4715                    | 10212               | A          | 5014       | 3           | 514              |  |
| 4716                    | 10213               | A          | 5015       | 1           | 994              | MVRKAKWKPLQLPLPRKIVNQKQH                               |
|                         |                     |            |            |             | 1                | RIPGGTVEISAITKDLKDAGVVIPTT                             |
|                         |                     | 1 1        |            |             |                  | SPFNSPIWSVQKTDGCWRMTVDYC                               |
|                         |                     |            | 1          |             |                  | KLTQVMTPIAAVVPDVVSLLKQINT                              |
|                         |                     |            | İ          |             |                  | YPGTCK\FLGVQWCGACRDI/PSKV                              |
|                         |                     | 1 1        | Ī          |             | ĺ                | KDKLLHLAPPTTKKEAQHLVGLFG                               |
|                         |                     |            |            |             |                  | FWREHIPHLGVLLQPMYQVTRKAA                               |
|                         |                     | 1 1        |            | 1           | 1                | SFEWGLEQEKALQQVQAAVQAALP                               |
|                         |                     |            |            |             |                  | FGPYDSADPTVLEMSVADRVAVWS                               |
|                         |                     | 1 1        | ì          | 1           | ŀ                | LWQAPIGESQWRPLGLWSKALPFS                               |
|                         |                     | ,          |            | ŀ           | İ                | ADNYSPFERRLLACYWALMETEGL                               |
|                         |                     | 1 1        | ì          | İ           | ĺ                | TMGHQVTMQPELPIMNWVLSDPSR                               |
|                         |                     |            |            |             | ĺ                | HKVGHAQQHSIIKLKWYICDQARA                               |
| 4717                    | 10011               |            |            |             |                  | VPEGTC\*LNKEVAQMPM                                     |
| 4717                    | 10214               | A          | 5016       | 1           | 643              | MVGKAKWKPLELPLPRKIVNQKQH                               |
| [                       |                     |            |            |             |                  | HIPEGIAEIAATIKDLKDAGVVIPTTS                            |
| ľ                       |                     |            | ľ          |             |                  | PFNSPIWPVQKTDGSWRMTVDYCK                               |
|                         |                     |            |            |             |                  | LNQVVTPIAAAVPDVVSFLEEINTSL                             |
| ł                       |                     |            | 1          | 1           |                  | GTWYAAIDLANAFFSIPVHKVHQKP                              |
|                         |                     |            | 1          | 1           |                  | FAFSWQG/QQYTFTVLPQDYINSLA                              |
|                         |                     |            | 1          |             |                  | L*HNLIWRDLDYF\LLLQDITLVHYI                             |
|                         |                     | $\bot\bot$ |            |             |                  | DDIMLIGSNDHKVGGAQQHSIIKWK                              |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
| 4718  | 10215                                   | A | 5017                                | 3   | 1074   | LYIHDQAQTGPEGT  VTASLSPVVATSPPQPMLPSDFPPLS EEINPMLPEATVIASPKEIARQDNVD SPQEPPPTPQFSSRPITRLKSQWAPR GPECVIGIDILSSWQNPHIGSLTGRV RAIMVGKAKWKPLELPLPRKIVNQ KQYHILGGTVEISATIKDLKDTEAV TPTTSPFNSPIWPVQKTDGSWRMTV DYCKLNQVVTPIAAAVPDV/VSLLE QINTSPGTWFEWSPK\KALQQVQAA VQAALPFGPYDPADPMVLEVSVAD RDAIWSLWNAAIGESQRRPLGFWS KALLSSADNYSPFERQLLASYWAL VETERLTVGHQVTLRPELPIMNWV LSDPSSHKVSGAQQRSIIKLKWYIH DWVRAGPEGT   |
| 4719  | 10216                                   | A | 5018                                | 1   | 1482   | MAPNSRVQELVLGQVAVICQGLLS LQPRTEGYTVGFLTFEVLDLTGSSA CRWPIVGLHSVIILLDKVTKEKDEL RDSNSWLQKQILSLKFSKTALSESLI SCRQRAEIVENQTQGLIMRPLAFHR GNCIGERGMTILFRGYWTEPTLIPED PKHHCSPPVKVRAYEDGSWKMTV DYHKLNQVMIPVTAAVPDVVSLLE KINTSPALFHNLVQRNLDCFSLPQDI TLVHYVDDIMLIGSSEQEVANTLDL LVRRLCAKGWEINLTKIQGPSSLVK FLGVQWCGASQDIPSKVKNKLLHL ALPTTKKEAQCLVGLFGFWKQLIPH LATPIIPQRAHEQSGHGGRNGGYTW AQQHGLPLTKADLATATAECPICQQ QRENGA/PRYGTIP\RGDQPATWWQ VDYVGPLPSWKGQQFVLTRIDTYS AYGFAYPTCNASAKTTIHSLTACLI HRHGIPHSIASDQGSHFTAKEVQQW AHAHGIHWSYHVPYYPEATGLIEW |
| 4720  | 10217                                   | A | 5019                                | 1   | 1494   |   |
| 4721<br>4722                                | 10218<br>10219                          | A | 5020<br>5021                        | 101   | 304  | MTVDVCVI NOVVUDIA A AVCDVIIC  |
| 4122  | 10219                                   | A | 3021                                | 1   | 1912   | MTVDYCKLNQVVIPIAAAVSDVVS LLEQINTSPGTWYAAIDLANAFFSIP VHKAQQKQFAFSWQGQQYTFTVLP QWYINSPALCHNLIRRDLDCFSLPL DITLVHYIDDIMLIGVPRQLLACY/W ALVETEHLTISHQVTMRPELPIMNW VLFDPSSHKVGCAQQHSIIKWKWY VHDWARAGPEGTTTPVISQWPHEQ CGHGGRDGGYAWAQQCRLPLTKA DLNTATAKRPICQQQRPTLSPQYGT IPQGDQPATWWWVDYMGSLPSWK GQRFVLTGIDTYSGYGFAYPACNAS AKTAICGLTECLIHHHDIPHSIASDQ GTHFMAKEVRQWAHDHGIHWSYH VSHHPEAAGLIEWWNGLLKSQLQC QLGDNTWQGWGKVLQKVVYALN QHPIYGTVSPIAKIHRSRNQGLEVAP LTITPRDPLAKFLLPFPATLQSAGLE VLVPEEGTLPPGDTMIPLNWKLRLP PRHFGLLLPLNQQAKKGVTVLAGV       |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         |  | TDLDYKDEITLLLHNGGKEEYAWN TGDPLGLLLILPCPMIKVNGKLQQL KPEALVPKGVVFPPGDTTMLSLSW KLRLPSGHVGLLMPLSQQVQKGVT VLAGVIDPGHTSAASLVLRSCVWS GSDTIVSPGSQDFRLGINDTTGFPVF PD  |
| 4723  | 10220                                   | A | 5022                                | 3                       | 835  | DLWPFTRVTVH/WGKANDQTFQGL<br>LDTGSELTLIPGYPKRHCCPPVKVR<br>VYGGQTDGSWRMTVGYHKLNQVV<br>TPIAAAVPDVVSLLEQINTPPSTW\Y<br>GQVAAFAPPTTKKEAQRLVGLFDF<br>GGNTLLIWVYYSGPLSSDLKGCQFE<br>WDPEQERLCKAFSAHSQWFGCQGL<br>GRSVDWKIDDKKLGKRMRMDLSE<br>LGKNREEYWYPVQQAKKGVKVLA<br>VVIDQTIKMKSVYYFTMEKTCQRQ<br>ATTAELEPEKNVIGVDETVEGQSYH<br>SSKQKDIPFQGEK  |
| 4724  | 10221                                   | A | 5023                                | 2                       | 1300   | DLWPFTRVTLHRGKRNDQTFQGLL DTGSELMLIPEDTKHHCGPPVKVEA YGGQVINGVLAQIQLTVGPVGSGT HPVVIYPVPECIIGIGILSSWQNPHIG SLTSRKTDGSWRMTVHYHKLNQM VTPIAAAIPDVVSLLEQVNTSPGSW YAAIDLANAFFFIPVHKAHQKQFAF SWQGQQYTFTVLHQGYINSPALYH NLIWRDLDRFSLPQDITLIHYIDDMT LIGSSEQDVANTLDLL/SDLSRGGF* *SSG*DDPFCGHHSASFPSHPCNRP MGP*TK*PWGQGWRLRMGSATCTP THQG*PGYGHC*VPNLPAAETNTKP SIWHHSSG*SASYQAAG*LYWTSFI MERAEVRP/TWSTCLLWIWVCLSCT QCFCQDYHLWTHGMPYPLSRYSAQ HCL*PRHSLYS*RSVAVGSCSWNSL VLPCSPSS*SSWI |
| 4725  | 10222                                   | A | 5024                                | 2                       | 790  | PRGRNRRKTFQERRMTLNESPEKI GKWIECYGHPPASKLVEIYIHTVFV EDKLSICIRSFNKKADGSWRMTVD YCKLNQVVTAIAAAIPDVVSLLEQI NTSPDTWYAAIDLANALFSIPVHKG YINSLALCHNVIWRELDCFSLPRDT TLVHYIDDIMLIGSSVQEVENKLDL LVKDKLLHLAPPTTKEEVQHMVGL FGFWRQHIPHLGVLHQPIYRVIRKA A/SFEWGPEQEKALQQVQAAVGGK QSENNLGHQRSPGLWFS  |
| 4726  | 10223                                   | A | 5025                                | 281                     | 1461   | VRVLSPVEKELKLWKNTHKLLSYP TVGAAVTQLQNLTAMGVIGSHGAR GQVVALNRQRQGDLQPFTRVTVH WGKG/NMQIFGGLLDTGSELTLIPG DPKHHCGPPVKVGAYGGQVINGVL AQVQITVGPQTHPVVISPVPECIIGID ILSSWQNPHIGSLTGIMVGKAKWK QLELPLPRKIVNQKPYCIPGGTVEIS ATIKDLKDAGVVIFTTSLFNSPIWPV QKTDGSWRMTVGYRRLNQVVTPIA   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         |  | AAVPDVVSLLEQINTSPGTWYAAID<br>MANAFFSIPVHKAHQKQFAFTWQG<br>QQYAFTVLPQGYINSPALCHNLIWR<br>DPDCFLLLQNITLLVHYVDDIMLIGS<br>SEQEVANALDLLVFSDHLAIKWVM<br>HSSIASSSGSGICVIRLKKVLKAQ   |
| 4727  | 10224                                   | A | 5026                                |                         | 3179   | MAEDKEEQVPSYTDGSRQRENEED TRVKTPDKTIRSHETYSLPREQYGG NYAHDSIISHQVPPTTCGNYGSTIQD EIWVGDHSGYVRPVPVPRSLNSDIS YFGVGGKQAVFFVGQSARMISKPA DSQDVHELVLSKEDFEKKEKNKEAI YSGYIRNRKDDYDNHTGIDLVGTII ATIKGSNEEDTDTPLFIGKVRTLEFP FVNGSAEIMLMPSNQQHKTDEKGR ANLGVFSVFAPRGEHTLQVKAIYN KSIIEGPIIKLMILPDPEKPVRLNVKY DKDASFLAGGLFTAPPLPAQLMSSL SCAWIIESVLNSWRKGCNKLRNQR ALHKKQDRGKLPEDRELQHTKKQT NWAGLLIPAMNNNVDMTARKLQR DLQPFTSVTVHCRKGNDQTFGGPL DAGSELTLIPGDPKHHCGPPVKVGA YGGQVINGVLAHPLIWLVQKTDGS /WRMTVDYCKLNQVVIPIAAAVSD VVSLLEQINTSPGTWYAAIDLANAF FSIPVHKAQQKQFAFSWQGQQYTF TVLPQWYINSPALCHNLIRRDLDCF SLPLDITLVHYIDDIMLIGSSEQEVA NTLDLFVRHLRARGWEINPTKIQGP STSVKFLGFQWCGACQAIPSKMRD KLLHLVPPTTKKEAQCL\QLLACY/ WALVETEHLTISHQVTMRPELPIMN WVLFDPSSHKVGCAQQHSIIKWKW YVHDWARAGPEGTT/HPCHFPMAP *TMWPWWQGWRLCMGSAM*TST H*G*PEYSHR*APNLPTAETNTEPSI WHHSSG*STSYLVVG*LYGISSIMER AEVCPHWNRYLLWIWVCLSCMQC FCQDCHLWTHGMPYPPS*YPTQHC L*PRHSLYG*RSAAVGS*SWNSLVL PCFPSS*SSWIDRMVEWPFEVTITVS TR*QYLAGLGQSSPEGRVCSESASNI WYCFSHSQDSQVQESRARSGTTHH HP*GSTSKIFASFSCNITVCWPRGLS SRGRNAATRRHNDSIKLEVKIATQT LWAPPTFKSTG*EGSYSVGWGD*PG L*R*NHSPTP*WR*GRVCMEYRSI |
| 4728  | 10225                                   | A | 5027                                | 2                       | 1284   | RASLNITMPYD*GQWETTTAQARSS CHCGPP/VKVEAYGSQVLKGVLAQ VQLTVGPVGPRTHPVVIFPVPECIIGI DMLSSRQNPHTGSLTGRVWTIMVR KAKWKPLELPLPRKIVNQKQYHIPE GIVEISATIKDLKDAGVVIPTTSPFNS PIWPVQKTDGSWRMTVGYCKLNQ VVTPIAAAVPDVVSLLEQINTPPGT WYAAIDLANDFFPIPVHKAHQKQF AFRWQGRQYTFTVLPQGRWEINMT  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
| 4729  | 10226                                   | A | 5028                                | 422                     | 1353   | KIQGPSTSVKFLGVQWCGACQDIPS<br>KVKDKLLHLVPPTIKKEAQCLVGLF<br>GFWRQHIPHLGMPLQPIYRVTQMA<br>ASFEWGS\EQEKALQQAG\QAAVQA<br>ALPLGP/HKDPADPLVLEVSVSDRD<br>AVWRLWQASI/GHKVGHAQQHSIIK<br>WKWYIRDWARADPEGTTKGQGQR<br>RWWQLAERQDSRDREAAIGERQET<br>AVGKTARDGEAVCD  |
|   |   |   |                                     | 422                     | 1252   | TTLFSVQIFQWRQLENLYFREKKFS VEVHDPRRASVTRRTFGHSGIAVHT WYACPALIKSIWAMAISQHQFYLD RKQSKSKIHAARSLSEIAI\DLTRTRT LENSKLANMGSKGKIISGSSGSLLSS GSGARRHCILLPGSQESDSSQSAKK DMLAALKSRQEALEETLRQRLEEL KKLCLREAELTGKLPVEYPLDPGEE PPIVRRIGP\AFKLDEQKILPKGEEA ELERLEREFAIQSQITEADRRLASDP NVSKKLKKQRKTKYINAVKKLQVY |
| 4730  | 10227                                   | A | 5029                                | 1                       | 400  | RHEERTTGILTSEGLASDTSLICVIED<br>FFDTALIISRSSSEGKIQMLDSFLLSL<br>GFLVTEKTVNHLLQQEERPCMDTL<br>DCG/LQVAISEALCRLTIKKSRDELV<br>HKWFDDEVIAEAFKEIKDREFETDS<br>RRFLN  |
| 4731<br>4732                                | 10228<br>10229                          | A | 5030<br>5031                        | 64                      | 612<br>323   | LFPTLWLLDLLGTVEEILPSLSENIS  |
|   |   |   |                                     |                         | 223  | VWGMKDSVPQGVISLKEKL\STSPD<br>EPVPRSHHVVSLLKSTCLYIFTSG\T<br>TGMIQFFWKA   |
| 4733  | 10230                                   | A | 5032                                | 287                     | 508  | YYSIFLIYYYYYFLRWSFALVAQAV<br>VQWCDLGSLQPLSPGFKRFS\PSALS<br>SWDYRHEQPRPANFIFLVETGFL  |
| 4734  | 10231                                   | A | 5033                                | 1                       | 3627   |   |
| 4735  | 10232                                   | A | 5034                                | 3                       | 3613   |   |
| 4736  | 10233                                   | A | 5035                                | 353                     | 406  | MLHLQGIIILMIVLYSCCRELIHSFLK<br>DSKSMPNCWGESDGPVTGARHPSW<br>EEEEDGGVWNTTGSQGSASSHNSA<br>SWGQGGKKQMK/CSLKKE   |
| 4737  | 10234                                   | A | 5036                                | 1                       | 514  | ECKDCGKSFTVSSSLTEHARIHTGE<br>KPYECKQCGKAFTGRSGLTKHMRT<br>HTGEKPYECKDCGKAYNRVYLLNE<br>HVKTHTEEKPFTCTVCRKSFRNSSC<br>LNKHI\HIHTGIKPYECKDCGKTFTV<br>SSSLTEHIRTHTGEKPYECKVCGKA<br>FTTSSHLIVHIRTHTGEKPYICK  |
| 4738  | 10235                                   |   | 5037                                | 1                       | 3222   |   |
| 4739  | 10236                                   | A | 5038                                | 1                       |  | MGPWAWKLRWTVALLLAAAGTA VGDRCERNEFQCQDGKCISYKWVC DGSAECQDGSDESQETCLSVTCKSG DFSCGGRVNRCIPQFWRCDGQVDC DNGSDEQGCPPKTCSQDEFRCHDG KCISRQFVCDSDRDCLDGSDEASCP VLTCGPASFQCNSSTCIPQLWACDN DPDCEDGSDEWPQRCRGLYVFQGD SSPCSAFEFHCLSGECIHSSWRCDG  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | 1  | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  GPDCKDKSDEENCAVATCRPDEFQ CSDGNCIHGSRQCDREYDCKDMSD EVGCVNVTLCEGPNKFKCHSGECIT LDKVCNMARDCRDWSDEPIKECGT NECLDNNGGCSHVCNDLKIGYECL CPDGFQLVAQRRCEDIDECQDPDTC SQLCVNLEGGYKCQCEEGFQLDPH TKACKAVGSIAYLFFTNRHEVRKM TLDRSEYTSLIPNLRNVVALDTEVA SNRIYWSDLSQRMICSTQLDRAHGV SSYDTVISRDIQAPDGLAVDWIHSNI YWTDSVLGTVSVADTKGVKRKTLF RENGSKPRAIVVDPVHGFMYWTD WGTPAKIKKGGLNGVDIYSLVTENI QWPNGITLDLLSGRLYWVDSKLHSI SSIDVNGGNRKTILEDEKRLAHPFSL AVFEDKVFWTDIINEAIFSANRLTGS DVNLLAENLLSPEDMVLFHNLTQP RGVNWCERTTLSNGGCQYLCLPAP QINPHSPKFTCACPDGMLLARDMRS CLTEAEAAVATQETSTVRLKVVPD KTVRWCAVSEHEATKCQSFRDHM KSVIPSDGPSVACVKKASYLDCIRAI AANEADAVTLDAGLVYDAYLAPN |
|---|---|---|-------------------------------------|----|--|---|
|   |   |   |                                     |    |  | SSIDVNGGNRKTILEDEKRLAHPFSL<br>AVFEDKVFWTDIINEAIFSANRLTGS<br>DVNLLAENLLSPEDMVLFHNLTQP  |
|   |   |   |                                     |    |  | QINPHSPKFTCACPDGMLLARDMRS<br>CLTEAEAAVATQETSTVRLKVVPD<br>KTVRWCAVSEHEATKCQSFRDHM  |
|   |   |   |                                     |    |  | AANEADAVTLDAGLVYDAYLAPN NLKPVVAEFYGSKEDPQTFYYAVA VVKKDSGFQMNQLRGKKSCHTGL GRSAGWNIPIGLLYCDLPEPRKPLE  |
|   |   |   |                                     |    |  | KAVANFFSGSCAPCADGTDFPQLC<br>QLCPGCGCSTLNQYFGYSGAFKCL<br>KDGAGDVAFVKHSTIFENLANKAD<br>RDQYELLCLDNTRKPVDEYKDCHL  |
|   |   |   |                                     |    |  | AQVPSHTVVARSMGGKEDLIWELL<br>NQAQEHFGKDKSKEFQLFSSPHGK<br>DLLFKDSAHGFLKVPQRMDAKMY<br>LGYEYVTAIRNLREGTCPEAPTDEC  |
|   |   |   |                                     |    |  | KPVKWCALSHHERLKCDEWSVNS VGKIECVSAETTEDCIAKIMNGEAD AMSLDGGFVYIAGKCGLVPVLAEN YNKSDNCEDTPEAG\YFAVAVVKK   |
|   |   |   |                                     |    |  | SASDLTWDNLKGKKSCHTAVGRTA GWNIPMGLLYNKINHCRFDEFFSEG CAPGSKKDSSLCKL\CMGSGLNLCE PNNKRGDTTGYTGAF\RCLVEKGD   |
|   |   |   |                                     |    |  | VAFC*KHQTVPTGTLGGEKNPDPW A\KDLNEKDY\ELLCLGWVPGKPV\ EEYAN\CHLARAPNHRCGSHGKDK EACVHK\ILRSTASHLFG\SNVTD\CS GNFWLVRS\ETKDLL\FRDDTVC/LW  |
| 4740  | 10237                                   | A | 5039                                | 2  | 342  | AKLHDRNTYEKYLGEEYVKAVGN<br>LRKCSTSSLLEACTFRRP<br>LSRVVLSAAATAAPSLRNAA/FLGP  |
| 4740  | 1023/                                   | A | - JU37                              | 2  |  | GVLQATRTFHTGQPHLVPVPPLPEY GGKVRYGLIPEEFFQFLYPKTGVTG PYVLGTGLILYALSKEIYVISAETFT ALSCSAFELFRDHF   |
| 4741  | 10238                                   | A | 5040                                | 53 | 940  | DCYLDVSLTMLSRVV\LSAAATAPT<br>IIMKNAAFLGPGVLQATRTFHT\GQP<br>HLCPMY\PIIPEYG\GKVRYG\LIPE\E   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|---------------------------------|---|
|   |   |   |                                     |   |                                 | FFQFLY/PLKTGVNTDPNVPPETWG LNLVTVLFQRKYMVEFRRRGPSLA LIKY*GGKWVYGNLKKYGSPLVAG LWLD*TPMEQKLGPT*EE/ARQGGF PSQHIQN\AIDYGRSLYQALVQKRH YLF\DVQRNNIAMALEVTYRERLYR VYK\EVKNRLDYHISVQNHDAVRN GTTNSLLNW\VE\KHVRAKLFPPQA RKEDILPKWHCRPIKLLAKEGSKAQ AQLW   |
| 4742  | 10239                                   | A | 5041                                | 2   | 205                             | APVTSW/IQPKDGSCPFSESTKTISLY<br>ISSEQQFHLPRPSESDDFIEDTADML\<br>VSFSGYSSAPKNQEQ   |
| 4743  | 10240                                   | A | 5042                                | 1   | 360                             | SPCLSERQFCCEKLPLQRSSRPQDSA<br>GQPVT/HAHCSLASTVDLCPPLLAT<br>HRISCWHCQDEVHGGRD\SVDKGD<br>LEALSLPAGHGDTDGPISLDVPDGA<br>PDPQRTKAAIDHLHHKILKSTE  |
| 4744  | 10241                                   | A | 5043                                | 106   | 396                             |   |
| 4745  | 10242                                   | A | 5044                                | 77  | 4026                            |   |
| 4746  | 10243                                   | A | 5045                                | 1   | 344                             | LDFIQTMLQVVGVVSVAVPV/IPWI<br>AIPLVPLGIIFIFLRRYFLETSRDVKR<br>LESTTRSPVFSHLSSSLQGLWTIRAY<br>KAEERCQELFDAHQDLHSGLSISGN<br>GFKGQDLLLFLA   |
| 4747  | 10244                                   | A | 5047                                | 3   | 378                             | ERDGALTLPLTPGLPSPPPLPP/HTSS QAHYRLSAFGQQFLFNLTANAGFIA PLFTVTLLGTPGVNQTKFYSEEEAE LKHCFYKGYVNTNSEHTAVISLCSG MLGTFRSHDGDYFIEPLQSMDEQE  |
| 4748  | 10245                                   | A | 5049                                | 2   | 278                             | FVNHGCSQ\TLHFVFKVGNRFQTAR<br>FYRDVLGMKVQAGADRGWRARLE<br>PAPEPALAEGGENGCVVNLSRRVS<br>DLRPCAVFSFRSVASCRWGS  |
| 4749  | 10246                                   | A | 5050                                |   | 1539                            | MRLTPFSLSTGNSFRYSRRLKKNIFG TAPALRVSEMSLRPSSRIFPCFSRNG LDFTIVITLAQPPVPGISFIVAKPRLF PGAGSAGCGLLERLFLSLLLGTGLR WCLRGCFPGARFCSTTSPEGHTTFT GLRRSARTQRLAQGPKPGPPAATV ARQTSRVSPAPPCSLRPGLRHESAPS GIGDVTARGALRGLGCTVRVTAAC GGNHGCSQ/LCLHFVFKVGNRLQT AAFHIGTSMGMKVQQHEEFEEG\CK AA\CNGP\YDG\KWSKTMVG/YLGP EDDHFVAELTYNYG\VGDYKLGN\D FMG\ITLA\SSQAVSNARK\LEWPLT EVAEGVF\ET\EAPGGYKFYLQNRSL PQSDPVLKVTLAVSDLQK\SLNYWC NLLGMKIYEKDEEKQRALLGYAGL TSVSLELQG\VKGGVDHAAAF\GRI\ AFSCPQKE\LPDL\EDLMKRENQKIL TPLVSLDTPGKATVQVVILADPDGH EICFVGDEAFRELSKMDPEGSKLLD DAMAADKSDEWFAKHNKPKASG |
| 4750  | 10247                                   | A | 5051                                | 21  | 223                             | HPGSRGCSEPRSGHCTPAWGTKVK<br>T/SRLNKNKTKQKKEVKDCMSSTPL   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|------------------------------------|---|
| 4751  | 10248                                   | В | 5052                                | 64  | 543                                | AHPPGVWCEWRGLIPSSSP RGWKRDREKRDDQDDVSSVRSEG GNIRGSFRGRGRGRGRGRGRGN PRLNFDYSYGYQEHGERTDQPFQTE LNTSMMYYYDDGTGVQVYPVEEA LLKEYIKRQIEYYFSVENLERDFFLR GKMDEQGFLPISLIAGFQRVQALTT   |
| 4752  | 10249                                   | A | 5053                                | 1   | 567                                | NLNLILPPLKDSTE*  AAATSAGA/PGRAVAGAGAGTQRA PGGCPREAPGAAPG\HKARGPGGPF GGEPPPPPP/LVAVAAVAAGSAGR GRPGR\VAAGPAEKRQPPLLPPKGN PWTKKPPQHLSPDTTGPPPPPLETLE AEFGSLKIIKAGKLKTKKSNKASDF SDMENWPTPSELVNTGFQSVLSQG NKKPPNRKEKEEKGEREEQ  |
| 4753  | 10250                                   | A | 5054                                | 3   | 763                                | SGRPHPVIRESSPSSSLALGGQLGRG RPSGRAAPGRANPSAPAGGPAREGP EFGSLKIIKAGKLKTKKSNKASDFS DMENWPTPSELVNTWISERPQPRK\ KKPQNRKEKEEKVEKRSNSDSKEN RETKLNGPGENRQ/STDEAQSSNQR KRANKHKWVPLHLDVVRSESQERP GSRNSSRCQPEANKPTHNNRRNDT RSW/ESEIEKKE/HDQDDVSSVRSEG GN\SRGSFRGRGRGRGRGRGRG   |
| 4754  | 10251                                   | A | 5055                                | 1   | 372                                | RHEQGISFLETESTFMTDQLVDALT TWQNKTKVGLLWSA\AHIRFKPTLS QQQKSPEQHETVLDGNLIIRYDVDR AISGGSIQTREALIKILDDLIPRDQFN LIVFSTEATQWRPSLVPASAEN  |
| 4755  | 10252                                   | A | 5056                                | 1   | 1021                               | AQAQYSAAVAKGKSAGLVKATGR NMEQFQVSVSVAPNAKITFELVYEE LLKRRLGVYELLLKVRPQQLVKHL QMDIHIFEPQGISFLETESTFMTNQL VDALTTWQNKTKAHIRFKPTLSQQ QKSPEQQETVLDGNLIIRYDVDRAIS GGSIQIENGYFVHYFAPEGLTTMPK NVVFVIDKSGSMSGRKIQQTREALI KILDDLSPRDQFNLIVF\STE\ATQWR PSLVPASAENVNKARSFAAGIQALG GTNINDAMLMAVQLLDSSNQEERL PEGSV\SLIILLTDGDPTVGETNPRSI QNNVREAVSGRYSLFCLGFGFDVS YAFLEKLALDNGGLGRG |
| 4756  | 10253                                   | A | 5057                                | 570   | 831                                | HGNYRNVCILLGLFYPHFVGEKKIH IGFFLFFPAIDLKSGSGKVYQGPAKG AADTTIILSDEYF\MEVVLGKLDPQK AFFSGRLKAEG   |
| 4757  | 10254                                   | A | 5058                                | 1   | 2229                               | MGSPLRFDGRVVLVTGAGAGLGRA YALAFAERGALVVVNDLGGDFKG VGKGSLAADKVVEEIRRRGGKAVA NYDSVEEGEKVVKTALDAFGRIDV VVNNAGILRDRSFARISDEDWDIIH RVHLRGSFQVTRAAWEHMKKQKY GRIIMTSSASGIYGNFGQANYSAAK LGLLGLANSLAIEGRKSNIHCNTIAP   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | NAGSRMTQTVMPEDLVEALKPEYV APLVLWLCHESCEENGGLFEVGAG WIGKLRWERTLGAIVRQKNHPMTP EAVKANWKKICDFENASKPQSIQES TGSIIEVLSKIDSEGGVSANHTSRAT STATSGFAGAIGQKLPPFSYAYTELE AIMYALGVGASIKDPKDLKFIYEGS SDFSCLPTFGVIIGQKSMMGGGLAEI PGLSINFAKVLHGEQYLELYKPLPR AGKLKCEAVVADVLDKGSGVVIIM DVYSYSEKELICHNQFSLFLVGSGG FGGKRTSDKVKVAVAIPNRPPDAV LTDTTSLNQAALYRLSGDWNPLHID PNFASLAGFDKPILHGLCTFGFSARR VLQQFADNDVSRFKAIKARFAKPV YPGQTLQTEMWKEGNRIHFQTKVV QETGDIVISNAYVDLAPT\SGTQAKT PSEGGK\LQITFVFEE\IGP\RLKDIGP V\VVK\KVNAVFEWHITKGGNIGAK WTIDLKSGSGKVYQGP\AKGAADT TIH/ILSDEDF/LWEVVLGQA*PSRKA FFSG\RLEGQEGNIMLS\QKLQMIL\K   |
| 4758  | 10255                                   | A | 5059                                | 1                       | 7449   | DYAKL   |
|   |   |   |                                     |                         | ,  | MTDCVDITKCKCEANI IDCOEDEDAC   |
| 4759  | 10256                                   | A | 5060                                |                         | 7458   | MTDSKPITKSKSEANLIPSQEPFPAS DNSGETPQRNGEGHTL/HQDTQPGR ASLPQRPQR\SGRRRNSLPPSHQKPP RNPLSSSDAAPSPELQANGTGTQGL EATDTNGLSSSARPQGQQAGSPSKE DKKQANIKRQLMTNFILGSFDDYSS DEDSVAGSSRESTRKGSRASLGALS LEAYLTTELLALDFGIFGIRGSLVFA GYPLTLLHTYRQGSNTSSLVFTGLG SGFIELLGCPLRPQQKAAVQRPSMS GLHLVKRGREHKKLDLHRDFTVAS PAEFVTRFGGDRVIEKVLIANNGIA AVKCMRSIRRWAYEMFRNERAIRF VVMVTPEDLKANAEYIKMADHYV PVPGGPNNNNYANVELIVDIAKRIP VQAVWAGWGHASENPKLPELLCK NGVAFLGPPSEAMWALGDKIASTV VAQTLQVPTLPWSGSGLTVEWTED DLQQGKRISVPEDVYDKGCVKDVD EGLEAAERIGFPLMIKASEGGGGKG IRKAESAEDFPILFRQVQSEIPGSPIF LMKLAQHARHLEVQILADQYGNA VSLFGRDCSIQRRHQKIVEEAPATIA PLAIFEFMEQCAIRLAKTVGYVSAG TVEYLYSQDGSFHFLELNPRLQVEH PCTEMIADVNLPAAQLQGFKPSSGT VQELNFRSSKNVWGYFSVAATGGL HEFADSQFGHCFSWGENREEAISN MVVALKELSIRGDFRTTVEYLINLL ETESFQNNDIDTGWLDYLIAEKVQA EKPDIMLGVVCGALNVADAMFRTC MTDFLHSLERGQVLPADSLLNLVD VELIYGGVKYILKVARQSLTMFVLI MNGCHIEIDAHRLNDGGLLLSYNG |

| SEQ ID                  | SEQ ID   | Me  | SEQ ID NO: | Nucleotide | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop                  |
|-------------------------|----------|-----|------------|------------|-----------------------|--|
| NO: of                  | NO: of   |     | in USSN    |            | location of last      | codon; /=possible nucleotide deletion; \=possible        |
| nucleo-tide<br>sequence | peptide  | d   | 09/770,160 |            | codon for last        | nucleotide insertion)                                    |
| sequence                | sequence |     |            | sequence   | amino acid of peptide |  |
| l                       |          | l   | ĺ          | sequence   | sequence              |  |
|                         |          |     |            |            |                       | NSYTTYMKEEVDSYRITIGNKTCVF                                |
|                         |          |     |            |            |                       | EKENDPTVLRSPSAGKLTQYTVEDG                                |
|                         | ł        | l   |            |            |                       | GHVEAGSSYAEMEVMKMIMTLNV                                  |
|                         | ŀ        |     |            |            |                       | QERGRVKYIKRPGAVLEAGCVVAR                                 |
|                         |          |     |            |            |                       | LELDDPSKVHPAEPFTGELPAQQTL                                |
|                         | ŀ        |     |            | l          |                       | PILGEKLHQVFHSVLENLTNVMSGF                                |
|                         | ļ        |     |            |            |                       | CLPEPVFSIKLKEWVQKLMMTLRH                                 |
| 1                       |          |     |            |            |                       | PSLPLLELQEIMTSVAGRIPAPVEKS                               |
|                         |          |     |            |            |                       | VRRVMAQYASNITSVLCQFPSQQIA                                |
|                         |          |     |            |            |                       | TILDCHAATLQRKADREVFFINTQSI                               |
|                         |          |     |            |            |                       | VQLVQSLGTEQDLVFYEKEKRNQSI                                |
|                         |          |     |            |            |                       | LGFEPVNSRHVSHVPETHRYKESHY                                |
| 1                       |          |     |            |            |                       | DKCVINLREQFKPDMSQVLDCIFSH                                |
|                         |          |     |            |            |                       | AQVAKKNQLVIMLIDELCGPDPSLS                                |
| l                       | 1        |     | }          |            | 1                     | DELISILNELTQLSKSEHCKVALRAR                               |
|                         |          |     |            |            |                       |  |
|                         |          |     |            |            |                       | QILIASHLPSYELRHNQVESIFLSAID                              |
| 1                       |          |     |            |            |                       | MYGHQFCPENLKKLILSETTIFDVLP                               |
|                         |          |     |            |            |                       | TFFYHANKVVCMASLEVYVRRGYI                                 |
|                         |          |     |            |            |                       | AYELNSLQHRQLPDGTCVVEFQFM<br>LPSSHPNRMTVPISITNPDLLRHSTE   |
|                         | 1        |     |            |            |                       |  |
| ]                       | j .      |     |            |            |                       | LFMDSGFSPLCQRMGAMVAFRRFE                                 |
|                         |          |     |            |            |                       | DFTRNFDEVISCFANVPKDTPLFSEA                               |
|                         |          |     |            |            |                       | RTSLYSEDDCKSLREEPIHILNVSIQ                               |
|                         |          |     |            |            |                       | CADHLEDEALVPILRTFVQSKKNIL                                |
|                         |          |     |            |            |                       | VDYGLRRITFLIAQEFAEDRIYRHLE                               |
|                         |          |     |            |            |                       | PALAFQLELNRMRNFDLTAVPCAN<br>HKMHLYLGAAKVKEGVEVTDHRF      |
|                         |          |     |            |            |                       | l I  |
| 1                       |          |     |            | ,          |                       | FIRAIIRHSDLITKEASFEYLQNEGER<br>LLLEAMDELEVAFNNTSVRTDCNHI |
|                         |          |     | -          | 1          |                       | FLNFVPTVIMDPFKIEESVRYMVMR                                |
|                         |          |     |            |            |                       |  |
|                         |          |     |            | 1          |                       | YGSRLWKLRVLQAEVKINIRQTTTG<br>SAVPIRLFITNESGYYLDISLYKEVT  |
| 1                       |          |     |            |            |                       | 1  |
|                         |          |     |            |            |                       | DSRSGNIMFHSFGNKQGPQHGMLIN                                |
|                         |          |     |            |            |                       | TPYVTKDLLQAKRFQAQTLGTTYIY                                |
|                         | ! !      | - 1 |            | ' i        |                       | DFPEMFRQASPAAQTRVHVHNVQA<br>LFKLWGSPDKYPKDILTYTELVLDS    |
|                         |          |     |            | İ          |                       | QGQLVEMNRLPGGNEVGMVAFKM                                  |
|                         |          |     | \          | ł          |                       | RFKTQEYPEGRDVIVIGNDITFRIGS                               |
|                         |          |     |            |            |                       | FGPGEDLLYLRASEMARAEGIPKIY                                |
|                         |          | 1   | ļ          |            | ļ                     | VAANSGARIGMAEEIKHMFHVAW                                  |
|                         |          |     |            |            |                       | VAANSGARIGMAEEIKHMFHVAW<br>VDPEDPHKKKKTVAFSAGNWIRSL      |
|                         |          |     | ĺ          |            |                       | TKVFFKGFKYLYLTPQDYTRISSLN                                |
| ļ                       |          |     | l          |            |                       | SVHCKHIEEGGESRYMITDIIGKDD                                |
|                         |          |     | [          | ſ          | ĺ                     | 1  |
|                         |          |     |            |            |                       | GLGVENLRGSGMIAGESSLAYEEIV                                |
|                         |          |     |            |            |                       | TISLVTCRAIGIGAYLVRLGQRVIQV                               |
|                         |          |     |            |            |                       | ENSHILTGASALNKVVEPCTVQDIA                                |
|                         | 1        | - { | 1          |            | }                     | NHVVSKQVLGREVYTSNNQLGGV                                  |
|                         |          |     |            |            |                       | QIMHYNGVSHITVPDDFEGVYTILE                                |
|                         |          |     |            |            |                       | WLSYMPKDNHSPVPIITPTDPIDREI                               |
|                         | l        | - } | }          |            | }                     | EFLPSRAPYDPRWMLAGRPHPTLK                                 |
|                         | }        |     |            |            |                       | GTWQSGFFDHGSFKEIMAPWAQTV                                 |
| •                       | }        |     |            |            | l                     | VTGRARLGGIPVGVIAVETRTVEVA                                |
|                         | }        |     | 1          |            |                       | VPADPANLDSEAKIIQQAGQVWFPD                                |
|                         |          |     |            |            |                       | SAYKTAQAVKDFNREKLPLMIFAN                                 |
|                         | 1        | 1   |            | 1          |                       | WRGFSGGMKDMYDQVLKFGAYIV                                  |
|                         |          |     | 1          |            | ļ                     | DGLRQYKQPILIYIPPYAELRGGSW                                |
|                         | 1        |     | }          |            |                       | VVIDATINPLCIEMYADKESRGGVL                                |
|                         |          |     |            |            |                       | EPEGTVEIKFRKKDLIKSMRRIDPAY                               |

| SEQ ID                            | SEQ ID                  | Me  | SEQ ID NO:            | Nucleotide  | Nucleotide   | Amino acid sequence ( X=Unknown; *=Stop  |
|-----------------------------------|-------------------------|-----|-----------------------|---|--|--|
| NO: of<br>nucleo-tide<br>sequence | NO: of peptide sequence | tho | in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|                                   |                         |     |                       |   | sequence   | KKLMEQLGEPDLSDKDRKDLEGRL<br>KAREDLLLPIYHQVAVQFADFHDTP<br>GRMLEKGVISDILEWKTARTFLYW<br>RLRRLLLEDQVKQEILQASGELSHV<br>HIQSMLRRWFVETEGAVKAYLWD<br>NNQVVVQWLEQHWQAGDGPRSTI<br>RENITYLKHDSVLKTIRGLVEENPE<br>VAVDCVIYLSQHISPAERAQVVHLL<br>STMDSPAST  |
| 4760                              | 10257                   | A   | 5061                  | 6   | 906  | EQPALLPRYRSGIRGYMKTVVLDLL RRYLRVE\TIFSKARDADANTSGMV GGVRSLSFTSVW\VLSPPAHYDKCV INLREQFKPDMSQVLDCIFSHAQVA KKNQLVIMLIDELCGPDPSLSDELISI LNELTQLSKSEHCKVALRARQILIAS HLPSYELRHNQVESIFLSAIDMYGH QFCPENLKKLILSETTIFDVLPTFFY HANKVVCMASLEVYVRRGYIAYEL NSLQHRQLPDGTCVVEFQFMLPSSH PNRMTVPISITNPDLLRHSTELFMDS GFSPLCQRMGAMVAFRRFEDFT |
| 4761                              | 10258                   | A   | 5062                  | 2   | 560  | APRLDVSFSQIIHRDIKPENILVSQSG ITKLCDFGFARTLAAPGDIYTDYVA TR*PVDIWALGCMIIEMATGNPYLP SSSDLDLLHKIVLKVGNLSPHLQNIF SKSPIFAGVVLPQVQHPKNARKKYP KLNGLLADIVHAWLQIDPADRISSS DLLHHEYFTRDGFI*KFMPELKA*L LQEAKSQF  |
| 4762                              | 10259                   | A   | 5063                  | 1   | 573  |  |
| 4763                              | 10260                   | A   | 5064                  | 2   | 791  | NLVNLIEVFRQKKKIHLVFEFIDHTV LDELQHYCHGLESKRLRKYLFQILR AIDYLHSNNT\VDIWALGCMIIEMA TGNPYLPSSSDLDLLHKIVLKVGNL SPHLQNIFSKSPIFAGVVLPQVQHPK NARKKYPKLNGLLADIVHEIEKEKK PKEIKVRVIKVKGGRGDISEPKKKE YEGGLGQQDANENVHPTSPDTKLV TIEPPNPINPSTNCNGLKENPHCGGS VTMPPINLTNSNLMAANLSSNLFSP QCEVSCNREEP  |
| 4764                              | 10261                   |     | 5065                  |   | 524  | TYGPASRGICRVSLGRPRWENAAT WKLAAMASIRLQGLHKPVYHALSD CGDHVVIMNTRHIAFSGNKWEQKV YSSHTGYPGGFRQVTAAQLHLRDP VAIVKLAIYGMLQ/NNLHRRTMME RLHLFPDEYIPEDILKNLVEELPQPR KIPKRLDEYTQEEIDAFPRLWTPPED YRL   |
| 4765                              | 10262                   | A   | 5066                  | 1   | 250  | YSSHTGYPGGFRQVTAAQLHLRDP<br>VAIVKLAIYGMLPKNLHRRTMMER<br>LHLFPDET*RLSAIRE*ELQKITVK*L<br>KLSSDEFL  |
| 4766                              | 10263                   | A   | 5067                  | 129   | 796  | MGKCSHLANFAAIASIRLQGLHKPV<br>\YHAPE*L/CGDHVVIMNTRHICIF/H<br>GNKWGTKSILFRILAYPGWSLDKVT<br>SLAPAFTLRRSQW/CNL*NLAIYGIP<br>AKKTFTRRTIDWKGLH\LFPDELYS   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | RKIFLKKFS*EELPSTTEKYLNVLDE<br>YTTRRNRRLFKIVDSTLKIIGYKRIRI<br>AENNSEVIETFLLMSFSNLQDGVKQ<br>LLQFEHLFLCAESLWGKVRKV   |
| 4767  | 10264                                   | A | 5068                                | 15  | 350  | GPGSAITVGPQPL/RAQRNHRLPVPS<br>PGLSIVMGLRPVPSPGPTGLPGHRQ<br>SSEMRPREAGSLRSSGEKGLPAPVP<br>RPQQSDMTKRTLPRDTPDTPRCPPQ<br>HCPWSRVRGQPQ   |
| 4768  | 10265                                   | A | 5069                                | 1   | 2175   |   |
| 4769  | 10266                                   | A | 5070                                | 3   | 86   | KNYRGTMS/KTKNGITCQKWSSTSP<br>RRPR   |
| 4770  | 10267                                   | A | 5071                                | 2   | 583  | LLLLFLKSGHGEPLDYYVYAQGA<br>SLFSVTNKHLGAGSTEECASQCVED<br>KEFTCGAFQYHSKEQQCAIMAENK<br>KSSIIIRMRDVVLFEK*MYLSECQTG<br>NGKNYRGTMSKTKNGITCSKMGVP<br>LFPHRPRFSPATHPSEGL\RNPDNDA<br>QGPWCYTTD\PEQRYDYCDIPECEG<br>QEWALGKCFHFCSSPVKINLL  |
| 4771  | 10268                                   | A | 5072                                | 844   | 4515   | TVKAPGYSHSHPGALLDLEVGDPN GTNAQLIKCFLLPLCPSFPLCPEECM HCSGENYDGKISKTMSGLECQAWD SQSPHAHGYIPSKFPNKNLKKNYCR NPDRELRPWCFTTDPNKRWELCDIP RCTTPPPSSGPTYQCLKGTGENYRG NVAVTVSGHTCQHWSAQTPHTHN RTPENFPCKNLDENYCRNPDGKRA PWCHTTNSQVRWEYCKIPSCDSSPV STEQLAPTAPPELTPVVQDCYHGDG QSYRGTSSTTTTGKKCQSWSSMTP HRHQKTPENYPNAGLTMNYCRNPD ADKGPWCFTTDPSVRWEYCNLKKC SGTEASVVAPPPVVLLPDVETPSEE DCMFGNGKGYRGKRATTVTGTPC QDWAAQEPHRHSIFTPETNPRAGLE KNATECGGASTELCSTSLCAFTML MDYEGQGEPLDDYVNTQGASLFSV TKKQLGAGSIEECAAKCEEG\EEFTC RAF\QYHSKEQQCVIMAENRKSS\III RMRDVVLFEKKV\YLSECKTGNGK NYRGTMSKTKNGITCQKWSSTSPH\ RPRFSPATHPSEGLEENYCRNPDND PQGPW\CYTT\DPEKRYDY\CDIL\EC *RRECMAFAVGGKLLTGKIFPRTMS WDWECQ\AWGLFRSPHG\HGYIPSK FPNKNLKKNYCRNPDRELRPWCFT TDPNKRWELCDIPRCTTPPPSSGPTY QCLKGTGENYRGNVAVTVSGHTCQ HWSAQTPHTHNRTPENFPCKNLDE NYCRNPDGKRAPWCHTTNSQVRW EYCKIPSCDSSPVSTEQLAPTAPPEL TPVVQDCYHGDGQSYRGTSSTTTT GKKCQSWSSMTPHRHQKTPENYPN AGLTMNYCRNPDADKGPWCFTTDP SVRWEYCNLKKCSGTEASVVAPPP VVLLPDVETPSEEDCMFGNGKGYR GKRATTVTGTPCQDWAAQEPHRHS |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 |     | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-----|--|---|
| 4772<br>4773                                | 10269                                   | A | 5073                                | 9   | 141<br>360   | IFTPETNPRAGLEKNYCRNPDGDVG GPWCYTTNPRKLYDYCDVPQCAAP SFDCGKPQVEPKKCPGRVVGGCVA HPHSWPWQVSLRTRFGMHFCGGTL ISPEWVLTAAHCLEKSPRPSSYKVIL GAHQEVNLEPHVQEIEVSRLFLEPT RKDIALLKLSSPAVITDKVIPACLPS PNYVVADRTECFVTGWGETQGTFG AGLLKEAQLPVIENKVCNRYEFLNG RVQSTELCAGHLAGGTDSCQGDSG GPLVCFEKDKYILQGVTSWGLGCA RPNKPGVYVRVSRFVTWIEGVMRN N FYRLSLGFKCDWFTMEKRV\KLEER YRDMAEENLKKDISISLKLL QTKPKESRKRIIIMFRT\EFNETENRI ESSSSSSSSS\FSSSSSSYKCLARLTK/ RKK/EKIQIIIVRSERKEIITNYRIKRIT                |
| 4774  | 10271                                   | A | 5076                                | 1   | 245  | KGYYELLYANQLYHLMKCPKFLER<br>HKLLKLTQEETKSGV<br>AAAYYYYTAARRQKGERRKKRK<br>EEER\KEEKKKRKKKEKKRRRRG<br>GRRTKKEEKKEKEKKRRTKKEKKK  |
| 4775  | 10272                                   | A | 5077                                | 68  | 246  | KKKKKKKVVSM SMAFLTTIEDTALKFIQNHKRPQIA\ KPILSKNRAESITLFNSKIHYMPTVI KPLRVTST  |
| 4776  | 10273                                   | A | 5078                                | 3   | 364  | TSIVAAQMFNVITVMQVRISPQHMT<br>SMWPIMVCELSQTFTQLEEDVKDK<br>VESLRSTNKVNRTKVSVTDANGPS<br>VGYIPQSEL\IMYLSACKFLDAALSIP<br>HYKIPLFKIYRWAFIPEVDTE   |
| 4777  | 10274                                   | A | 5079                                | 2   | 1315   | GKDAKILCSNPNTGEVLYELPTNTQ RCFDIQWCPRNPAVLSAASFAGRIS VYSIMGGSTDGLRQKQVDKLSSSFG NLDPFGTGQPLPPLQIPQQTAQHSIV LPLKKPPKWIRRPVGASFSFGGKLV TF\ENVRMPSHQGAEQQQQHHVFI SQVVTEKEFLSRSDQLQQAVQSQGF INYRQKKIDASQTELEKNVWPFLPV TFEDDSRGKYLELLGYRKEDLGK/K DCFGL/GTKWMEPMWLLKTLTKYH ITNHEPAG*PPVTNAAATASSSSTTA KPVFIPTDTSSRWTALPWRTATSWS NRHAPIFFTAQY*RCPRGSYWKYLP ACAVFGNKKNYQETYSR*APHSKD HI*GSYSALPFFSNRPSNQEEAR*CQ QTFGVSV**T*GTDTFTNNHQWFTQ HCKEH*NSKLLRRIDHAYPHS*HQQ LQ*DLCFHASSQSCL |
| 4778  | 10275                                   | A | 5080                                | 18  | 3600   |   |
| 4779  | 10276                                   | A | 5081                                | 238 | 480  | SIQFYFFSFQDSKGKHSLVSVIGPQN<br>GWNDPPALNRVPKKKKMPENFMPP<br>VPITSPIMNPLGDPQSQMLQQQPSA\<br>PVPLS   |
| 4780  | 10277                                   | A | 5082                                | 352 | 4060   | DYSRRYILRMKLKEVDRTAMQAW<br>SPAQNHPIYLATGTSAQQLDATFST  |

| SEQ ID                  | SEQ ID              | Me | SEQ ID NO: | Nucleotide                 | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop           |
|-------------------------|---------------------|----|------------|----------------------------|-----------------------|---|
| NO: of                  | NO: of              |    | in USSN    | location of                | location of last      | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide<br>sequence | peptide<br>sequence | d  | 09/770,160 | first codon<br>for peptide | codon for last        | nucleotide insertion)                             |
| sequence                | sequence            |    |            | sequence                   | amino acid of peptide |   |
|                         |                     |    |            |                            | sequence              |   |
|                         |                     |    |            | -                          |                       | NASLEIFELDLSDPSLDMKSCATFSS                        |
| ]                       |                     | ļ  | j          | J                          |                       | SHRYHKLIWGPYKMDSKGDVSGVL                          |
|                         |                     |    |            |                            |                       | IAGGENGNIILYDPSKIIAGDKEVVI                        |
|                         |                     | 1  |            | }                          |                       | AQNDKHTGPVRALDVNIFQTNLVA                          |
| ł                       | 1                   | 1  | ł          | 1                          |                       | SGANESEIYIWDLNNFATPMTPGAK                         |
|                         |                     |    |            |                            |                       | TQPPEDISCIAWNRQVQHILASASPS                        |
|                         | 1                   |    |            |                            |                       | GRATVWDLRKNEPIIKVSDHSNRM                          |
| 1                       | l                   | 1  | Ì          |                            |                       | HCSGLAWHPDVATQMVLASEDDR                           |
|                         |                     |    |            |                            |                       | LPVIQMWDLRFASSPLRVLENHAR                          |
|                         |                     |    |            |                            |                       | GILAIAWSMADPELLLSCGKDAKIL                         |
|                         | 1                   |    |            |                            |                       | CSNPNTGEVLYELPTNTQWCFDIQ                          |
| ł                       | ł                   |    | 1          | ļ                          |                       | WCPRNPAVLSAASFDGRISVYSIMG                         |
|                         |                     |    |            | ļ                          | 1                     | GSTDGLRQKQVDKLSSSFGNLDPFG                         |
|                         |                     |    |            | i                          |                       | TGQPLPPLQIPQQTAQHSIVLPLKKP                        |
|                         | [                   |    |            |                            |                       | PKWIRRPVGASFSFGGKLVTFENVR                         |
|                         |                     | 1  |            |                            |                       | MPSHQGAEQQQQHHVFISQVVTE                           |
|                         |                     |    | ]          |                            |                       | KEFLSRSDQLQQAVQSQGFINYCQK                         |
|                         |                     |    | 1          |                            |                       | KIDASQTEFEKNVWSFLKVNFEDDS                         |
|                         |                     | 1  |            |                            |                       | RGKYLELLGYRKEDLGKKIALALN                          |
|                         | }                   | 1  | 1          |                            |                       | KVDGANVALKDSDQVAQSDGEESP                          |
|                         |                     |    |            |                            |                       | AAEEQLLGEHIKEEKEESEFLPSSGG                        |
|                         |                     |    |            |                            |                       | TFNISVSGDIDGLITQALLTGNFESA                        |
|                         |                     | 1  |            |                            |                       | VDLCLHDNRMADAIILAIAGGQELL                         |
|                         |                     |    |            |                            |                       | ARTQKKYFAKSQSKITRLITAVVMK                         |
|                         |                     |    |            |                            |                       | NWKEIVESCDLKNWREALAAVLTY                          |
|                         |                     |    |            |                            |                       | AKPDEFSALCDLLGTRLENEGDSLL                         |
|                         |                     |    |            |                            |                       | QTQACLCYICAGNVEKLVACWTKA                          |
|                         |                     |    |            |                            |                       | QDGSHPLSLQDLIEKVVILRKAVQL                         |
|                         |                     |    |            |                            |                       | TQAMDTSTVGVLLAAKMSQYANL                           |
|                         |                     |    |            |                            |                       | LAAQGSIAAALAFLPDNTNQPNIMQ                         |
|                         |                     | l  | 1          | l 1                        |                       | LRDRLCRAQGEPVAGHESPKIPYEK                         |
|                         |                     | J  | j          | j                          |                       | QQLPKGRPGPVAGHHQMPRVQTQ                           |
|                         |                     |    |            |                            |                       | QYYPHGENPPPPGFIMHGNVNPNA                          |
|                         |                     |    |            |                            |                       | AGQLPTSPGHMHTQVPPYPQPQPY                          |
|                         |                     | ł  |            |                            |                       | QPAQPYPFGTGGSAMYRPQQPVAP                          |
|                         |                     |    |            |                            |                       | PTSNAYPNTPYISSASSYTGQSQLYA                        |
|                         |                     |    |            |                            |                       | AQHQASSPTSSPATSFPPPPSSGASF                        |
|                         |                     | 1  |            |                            |                       | QHGGPGAPPSSSAYALPPGTTGTLP                         |
|                         |                     |    |            |                            |                       | AASELPASQRTGPQNG\WNDPPALD                         |
|                         |                     |    |            |                            |                       | \KVPKKKKMPENF\MPPVPITSPIMN                        |
|                         |                     |    |            | [                          |                       | RLGDPQSQMLQQQP\SAPVPLSSQSS                        |
|                         |                     |    |            |                            |                       | FPQPHLPGG\QPFPWGYSKPFGFKQ                         |
|                         |                     |    |            | ]                          | ,                     | GMATIFFQSPNIEGAPGAPIG\NTFQ                        |
|                         |                     |    |            |                            |                       | HVQS\LPTKKITKKPI\PD\EHLILKTT                      |
|                         |                     |    |            |                            |                       | FEDLIQRCLSSATDPQTKRKLDDAS                         |
|                         |                     |    |            |                            |                       | KRLEFLYDKLR\DRTFSPTITSGLHNI                       |
|                         |                     |    |            |                            |                       | ARSIETRNYSEGLTMHTHIVSTSNFS                        |
| 4781                    | 10278               | A  | 5084       | 121                        | 410                   | ETSAFMPVLKVVLTQANKLGV                             |
| 7/01                    | 102/8               | A. | 3084       | 121                        | 419                   | DLCFTTPKAGRRQEITKIRAELNKV                         |
|                         |                     |    |            |                            |                       | EVQETIQKISEKRSWLFNIINKIARLL TRI IOVKDIOTIVET      |
|                         |                     |    |            |                            |                       | TRLIQKKD\QINTVRNDKGDITTYPT                        |
| 4792                    | 10070               |    | 5005       |                            |                       | EIQKTLRDYYEHLYACRVENLQ                            |
| 4782                    | 10279               | A  | 5085       | 1                          | 279                   | TMDSNNTV\DQLDL\TDIYRTLHLTS                        |
|                         |                     |    |            |                            |                       | AAYTFFSSAHRLCSRI\DLRLSHKTS                        |
|                         |                     |    |            |                            |                       | LNKFKKIVIIPGIFCDQNGIQPEINSG                       |
| 4783                    | 10280               |    | 5096       |                            | 270                   | RKMRRVSNVWKLNNIL                                  |
| 4/03                    | 10280               | A  | 5086       | 1                          | 279                   | TMDSNNTV\DQLDL\TDIYRTLHLTS                        |
|                         |                     |    |            |                            |                       | AAYTFFSSAHRLCSRI\DLRLSHKTS                        |

| SEQ ID                  | SEQ ID              |               | SEQ ID NO:            |                            | Nucleotide                      | Amino acid sequence ( X=Unknown; *=Stop                 |
|-------------------------|---------------------|---------------|-----------------------|----------------------------|---------------------------------|---|
| NO: of                  | NO: of              |               | in USSN<br>09/770.160 | location of                | location of last                | codon; /=possible nucleotide deletion; \=possible       |
| nucleo-tide<br>sequence | peptide<br>sequence | đ             | 09/7/0,160            | first codon<br>for peptide | codon for last<br>amino acid of | nucleotide insertion)                                   |
|                         |                     |               |                       | sequence                   | peptide                         |   |
| ļ                       | ļ                   | -             |                       |                            | sequence                        | L NVDVVVII WDOYDOD OVODDOGO                             |
|                         |                     |               |                       |                            |                                 | LNKFKKIVIIPGIFCDQNGIQPEINSG                             |
| 4784                    | 10281               | A             | 5087                  | 1                          | 1915                            | RKMRRVSNVWKLNNIL  |
| 4/04                    | 10201               | ^             | 3087                  | 1                          | 1913                            | MAILPLLLCLLPLAPASSPPQSATPS<br>PCPRRCRCQTQSLPLSVLCPGAGLL |
| 1                       |                     | Ì             | i                     | İ                          |                                 | FVPPSL\DRRAAELRLADNFIASVRR                              |
|                         |                     |               |                       |                            |                                 | RDLANMTGLLHLSLSRNTIRHVAA                                |
|                         | 1                   | 1             | ł                     | 1                          |                                 | GAFADLRALRALHLDGNRLTSLGE                                |
|                         |                     |               |                       |                            | •                               | GQLRGLVNLRHLILSNNQLAALAA                                |
|                         |                     |               |                       | ļ                          | ]                               | GALDDCAETLEDLDLSYNNLEQLP                                |
| ļ                       |                     |               | 1                     |                            | ļ                               | WEALGRLG\NVNTLGLDHNLLASV                                |
|                         |                     |               |                       |                            |                                 | PAGAFSP\LHKLARLDMTSNRLTTIP                              |
|                         |                     |               |                       |                            |                                 | PDPLFSRLPLLARPRGSPASALVLAF                              |
|                         |                     |               |                       |                            | [                               | GGNPLHCNCELVWLRRLAREDDLE                                |
|                         |                     |               | ļ                     |                            |                                 | ACASPPALGGRYFWAVGEEEFVCE                                |
|                         |                     |               |                       |                            |                                 | PPVVTHRSPPLAVPAGRPAALRCRA                               |
|                         | 1                   | 1             | 1                     |                            |                                 | VGDPEPRVRWVSPQGRLLGNSSRA                                |
|                         |                     |               |                       |                            |                                 | RAFPNGTLELLVTEPGDGGIFTCIAA<br>NAAGEATAAVELTVGPPPPPOLANS |
|                         |                     | -             | 1                     |                            | }                               | TSCDPP/PGRGLPDALTPPSAASASA                              |
|                         |                     |               |                       | 1                          |                                 | KVADTGPPTDRGVQV\TEHGATAA                                |
|                         |                     |               |                       |                            |                                 | LVQWPDQRPIPGIRMYQIQY\NSSA                               |
|                         |                     |               |                       |                            | ]                               | DDILVYRMIPAESRSFLLTDLASGRT                              |
|                         |                     |               | Ė                     |                            |                                 | YDLCVLAVYEDSATGLTATRPVGC                                |
|                         |                     |               |                       |                            |                                 | ARFSTEP\SLRPCGAPHAPFLGGTMII                             |
|                         |                     |               |                       |                            |                                 | ALGGVIVASVLVFIFVLLMRYKVHG                               |
|                         |                     |               |                       |                            |                                 | GQPPGKAKIPAPVSSVCSQTN\GAL                               |
|                         |                     |               |                       |                            |                                 | GPTPTPAPPAPEPAALRAHTVVQLD                               |
| 4785                    | 10282               | $\frac{1}{A}$ | 5088                  | 1387                       | 1567                            | CRALGARPRTCGTLARRPPL                                    |
| 4765                    | 10202               | A             | 3088                  | 1387                       | 1367                            | GKNLLPLFFFFFFFETVSQSVAQAG<br>VQWRHLGSPKPLPP\GSSDSPASVSQ |
|                         |                     |               |                       |                            |                                 | AAETTGTCHH  |
| 4786                    | 10283               | +A            | 5089                  | 96                         | 408                             | SPRKRKTRHSTNPPLECHVGWVMD                                |
| ,,,,,,                  |                     |               |                       |                            | 100                             | SRDHGPGTSSVSTSNASPSEGAPLA                               |
|                         |                     | -             |                       | 1                          |                                 | GRYGCTPH\SFPKFQNPSHELLKEN                               |
| •                       |                     |               |                       |                            |                                 | GFTQQVYHKYRRRCLSERKRLGIG                                |
|                         |                     | l             |                       |                            |                                 | QSQEMNT   |
| 4787                    | 10284               | Α             | 5090                  | 390                        | 665                             | PLNIHYCFLGGKYLVFGFSVAANKT                               |
|                         | }                   |               |                       |                            |                                 | SGAP\GNSPVSAIRAFGDAHPDLVT\                              |
|                         |                     |               |                       |                            |                                 | PGTF\IPYCSMAHAQLCFHGHRDAV                               |
| 47700                   | 10005               | -             | 5001                  |                            |                                 | KFFVAVPGQVISPQSSSS                                      |
| 4788                    | 10285               | A             | 5091                  | 185                        | 386                             | WEASKKKPRGAQISNAITTYKYLPK                               |
|                         |                     |               |                       |                            |                                 | VGV\KNYQTEALYKPIQTGKIGHPV                               |
| 4789                    | 10286               | A             | 5093                  | 3                          | 330                             | FFQKPPLLGDGQNYDTPP                                      |
| 7/07                    | 10200               | A             | 2033                  | )                          | 330                             | GTGLKARKSASSLPETFPTRTRHGE<br>AALPLSPTWKMTGPVGNPMIPROR   |
|                         |                     | ] ]           |                       | ] ]                        |                                 | SMSLLTAVSGQPHFQDSALSQASSS                               |
|                         |                     |               |                       |                            |                                 | PDLL/LHLSPR\SCPGRVQETLKATD                              |
|                         |                     |               |                       |                            |                                 | RPPRCPAGCG  |
| 4790                    | 10287               | A             | 5094                  | 2                          | 349                             | PRVRKSPGPNGFTANFYQTFKELISI                              |
|                         |                     | •             |                       |                            |                                 | LLKLFSSSSSLKKGENPPNSFYGAIIP                             |
|                         |                     |               |                       |                            |                                 | RIPNPNMDLPSSSPT/RPVSGRNMEA                              |
|                         |                     |               |                       |                            |                                 | KIFTKFLAGHFKQSFGREIHHDQREF                              |
|                         |                     |               |                       |                            |                                 | IPGIQGGFNIGN  |
| 4791                    | 10288               | A             | 5095                  | 2                          | 353                             | PRVRKSPGPNGFTANFYQTFKELISI                              |
|                         |                     |               |                       | ] ]                        |                                 | LLKLFSSSSSLASSSSSSSSSSSSSS                              |
|                         |                     |               |                       |                            |                                 | SSPPNMDLPSSSPT/RPVSGRNIEAKI                             |
|                         |                     |               |                       |                            |                                 | FTKFLPGHFQQSFGRVTHLDQRELI                               |
|                         |                     |               |                       |                            |                                 | LGNQGGSTICKS  |

| SEQ ID      | SEQ ID   | Me  | SEQ ID NO: | Nucleotide              | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop                 |
|-------------|----------|-----|------------|-------------------------|---------------------|---|
| NO: of      | NO: of   |     | in USSN    | location of             | location of last    | codon; /=possible nucleotide deletion; \=possible       |
| nucleo-tide | peptide  | d   | 09/770,160 | first codon             | codon for last      | nucleotide insertion)                                   |
| sequence    | sequence | 1   |            | for peptide<br>sequence | amino acid of       |   |
| ĺ           |          |     | İ          | sequence                | peptide<br>sequence |   |
| 4792        | 10289    | A   | 5096       | 1                       | 262                 | RGRAGGEPLPATTGAAPPPGRRLH/                               |
|             |          |     |            |                         |                     | RQLPDRRGLASMPREEKASLNEPG                                |
|             |          |     |            |                         |                     | GPGRGRRRGSVQLHGEGGPRGGEE                                |
|             |          |     |            |                         |                     | GTGREEWNEKAEFTL   |
| 4793        | 10290    | A   | 5097       | 116                     | 177                 | LGEHGVYSGVGTGGRLSS*KKGKP                                |
|             |          |     |            |                         |                     | WFK*KKLKGGPIPI*RDPRGFSRFSV                              |
| 4794        | 10291    | C   | 5098       | 231                     | 347                 | MGLGPHLKFFYLKHGLPFFKELNPL                               |
| 4795        | 10202    | +-  | 5000       | 510                     | 021                 | KVKIWPRNPWIKKI*   |
| 4/93        | 10292    | A   | 5099       | 518                     | 931                 | ATRHSMLSCIIYTYIYIKHTHTHVFI                              |
|             |          |     |            |                         |                     | YIYTYTYIHTHIYTYTYICIHTHIHIYI                            |
|             | 1        |     |            |                         |                     | YIYIHTHFFFFFFFFETESRSVTQAGV<br>QWHDLGSLQAASWGHA/DSPASTS |
|             |          |     |            |                         |                     | QAAGTTGAHHHAQ/LIFFFFVFLVET                              |
|             |          |     |            |                         |                     | GPHRASQDS   |
| 4796        | 10293    | Α   | 5100       | 2                       | 1109                | DAEMLVMAPRTVLLLLSAALALTE                                |
|             |          |     |            |                         |                     | TWAGSHSMRYFDTAMSRPGRGEPR                                |
|             |          |     |            | 1                       |                     | FISVGYVDDTQFVRFDSDAASPREE                               |
|             |          |     |            |                         |                     | PRAPWIEQEGPEYWDRNTQIFKTNT                               |
|             |          | 1   |            |                         |                     | QTDRESLRNLRGYYNQSEAGSHTL                                |
|             |          |     |            |                         |                     | QSMYGCDVGPDGRLLRGHNQYAY                                 |
|             |          |     |            |                         |                     | DGKDYIALNEDLRSWTAADTAAQI                                |
|             |          |     |            |                         |                     | TQRKWEAARVAEQDRAYLEGTCV                                 |
|             | }        | 1   |            |                         |                     | EWLRRYLENGKDTLERADPPKTHV                                |
|             |          |     |            |                         |                     | THHPISDHEATLRCWALGFYPAEIT                               |
|             |          |     |            |                         |                     | LTWQRDGEDQTQDTELVETRPAGD<br>RTFQKWAAVVVPSGEEQRYTCHVQ    |
|             |          |     |            |                         |                     | HEGLPKPLTLRWEPSSQSTVPIVGIV                              |
|             |          |     |            |                         |                     | AGLAVLVVTVAVVAVVAAVMCRR                                 |
|             |          |     |            |                         |                     | KSSGGKGGSYSQAASSDSAQGSDV                                |
|             |          |     |            |                         |                     | SLTA*KA   |
| 4797        | 10294    | A   | 5101       | 3                       | 1145                | SDSPQTPRMRVMAPRTLILLLSGAL                               |
|             |          |     |            |                         |                     | ALTETWACSHSMRYFYTAVSRPGR                                |
|             |          |     |            | <i>'</i>                |                     | GEPRFIAVGYVDDTQFVRFDSDAAS                               |
|             |          |     |            |                         |                     | PRGEPRAP\WVEQEGPEYWDRETQ                                |
|             |          | 1 1 |            |                         |                     | KYKRQAQTDRVSLRNLRGYYNQSE                                |
|             |          |     |            |                         |                     | AGSHTLQWMYGCDLGPDGRLLRG                                 |
|             |          |     |            |                         |                     | YDQSAYDGKDYIALNEHLRSCTAA                                |
|             |          |     |            |                         |                     | DTAAQITQRKWEAARAAEQQRAYL<br>EGTCVEWLRRYLENGKETLQRAEH    |
|             |          |     |            |                         |                     | PKTHVTHHLVSDHEATLRCWALGF                                |
|             |          |     |            |                         |                     | YPAEITLTWQRDGEDQTQDTELVET                               |
|             |          |     |            | [                       |                     | RPAGDGTFQKWAAVVVPSGEEQRY                                |
|             |          |     |            |                         |                     | TCHVQHEGLPEPLTLRWEPSSQPTIP                              |
|             |          |     |            |                         |                     | IVGIVSGPAVLAVLAVLAVLAVLGA                               |
|             |          |     |            |                         |                     | VVAAVIHRRKSSGGKGGSCSQAAS                                |
|             |          |     |            |                         |                     | SNSAQGSDESLIACKA  |
| 4798        | 10295    | A   | 5102       | 3                       | 242                 | GFWAPRVCKDIDKWHLSEPEALWF                                |
|             |          |     |            |                         |                     | GEGGSPGGCRW\GGWLCQGKNRA                                 |
|             |          |     |            |                         |                     | AGGVGAEGACLGLLSATGLLWMT                                 |
| 4500        | 1000     | 4   |            |                         |                     | GLQEPREPQV  |
| 4799        | 10296    | A   | 5103       | 1                       | 138                 | FPLIPKPGKDPFN/ENFRPIFLMAKN                              |
| 4000        | 10005    |     | <u> </u>   | - 50                    |                     | AKILKKILANLIFQPLKKIL                                    |
| 4800        | 10297    | A   | 5104       | 59                      | 337                 | IPYPALPFTSVEAPNSHVKAVMKTS                               |
|             |          |     |            |                         |                     | VLLSWEIPENYNSAMPFKILYDDGK                               |
|             |          |     |            |                         |                     | MVEEVDGRATQKLIVIL\NPEKSYSF                              |
| 4801        | 10298    | A   | 5105       | 54                      | 226                 | ELTYRGNCAGGLELMVT TKAETENLNRPVT/EIKSVI/NSLPTK           |
| 7001        | 10270    | A   | 2102       | 24                      | 440                 | INVETERING A IVETUS A IVINOPLA IV                       |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|------------------------------------|---|
|   |   |   |                                     |   |                                    | KSPGLDGFIAKFFQTYKREIIPTLLK<br>LLQKLKW   |
| 4802  | 10299                                   | A | 5106                                | 2   | 265                                | ETVKLLEENI/GQKLFDIGLGSDFLDI<br>TPKAQETKINKWDFIKLKSFCTVKE<br>TIKMKRQSVEWEKILVSHVSDKWFI<br>SKIQGIYITQYQ   |
| 4803  | 10300                                   | A | 5107                                | 1   | 296                                | GREKEEGESGEDWGRV\GREKEGG<br>EGREEEGEGGREEEGEGGRKEEGE<br>GGREEEGEGGREEEGE/<br>GREEEGEGGRQEEGEGGRREEGRG<br>GRS  |
| 4804  | 10301                                   | A | 5108                                | 1   | 253                                |   |
| 4805  | 10302                                   | A | 5109                                | 190   | 472                                |   |
| 4806  | 10303                                   | A | 5110                                | 1   | 314                                | HNVVPHVFMLQKEITKKNSTFRVHI<br>KAVFYN/HDIYCMPPLLNYRKTFDV<br>IVIDPPWQSKSVKRSNRYSYLSPLQI<br>KQIPIPKLAAPNCLLVTWLTNTQKH<br>LRFIK  |
| 4807  | 10304                                   | A | 5111                                | 3   | 362                                | FFFFFETESLSVPQAGVQ*HDLSSLQ<br>PP/PPGFTPFSCLSLPSSWDYRCPPPR<br>PA/NIFFVFLVETGFHHVSQDGLDLL<br>T/S/GDPPASASQSAGITGVSHRARPP<br>PPQFFIQLPLYNIHTLEGR   |
| 4808  | 10305                                   | A | 5112                                |   | 385                                | FFFETESRSVAQAGGQWHDLSSLQ<br>APTPGFTPFSCLSLPSSWDYRCPPPC<br>PANFFVFLVETGFHHVSRDGLDFLT<br>S\DPPTSASQSVGITGVSHCARARPF<br>FKKKKKKKKTSILSSSSLFSHKQRSFG<br>F   |
| 4809  | 10306                                   | A | 5113                                | 1   | 390                                | SKAVKV/YRLITRNSYEREMFDKAS<br>LKLGLDKAVLQSMSGRDGNITGIQ<br>QFSKKEIEDVLRKGAYAAIMEEDDE<br>GSKFCEEDIDQILLRRTTTITIESEGK<br>GSTFAKASFVASGNRTDISLDDPNF<br>WQKWA   |
| 4810  | 10307                                   | A | 5114                                | 2   | 214                                | GRVDIERAIILVQTGQQALEPA\VRL<br>RRAPYPCHTSDLFLNNVGFFFPLIM<br>MLTWMVSVASMVRPLVSQQE   |
| 4811  | 10308                                   | A | 5115                                | 30  | 379                                | KRSVNSPGRALSELCVSTELGFLRC<br>VSVVCSLSQEYFLFTTLLYFGL/LPF<br>ACLLSSSPVFFVFRCSVPLFFCFLFC<br>VSLCLPFLGFFHVLFFHRLLPIVFSF<br>MEGFYWAWCLVFFCL  |
| 4812  | 10309                                   | A | 5116                                | 1   | 304                                | GTRETVGLGDTNLAHQCSRLTMVN<br>NDNHSEAYNNLAVLEMRKGHVQQ<br>ARALLQTASALSPHMYET\DFNFATI<br>CDMTGYLHRSYVDAQKSEAALSEH<br>VDTQH  |
| 4813  | 10310                                   | A | 5117                                | 119   | 264                                |   |
| 4814  | 10311                                   | A | 5118                                | 720   | 2798                               | VYWPHSFLGCPSNYPLYLGAETRQ GGRARPPFLPLSFPPRFPRPNSPFQN VLETQRISYSFPLLADTSNTRATSGH AQQPAPILPLREVAGAEDIIRVHVPF SLSDLSQIAKRLGSFSSDPDTYIKEF KYLTQSYELTWHDLYIILSSTLLPEK KERVWLAAQAHANDLHRQDPTKPI GAAAVPLEEPPWKYQPTDPGRASR |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         | sequence   | NHMITCLIAGLNKAAHKAVNFEKL KEISQRADENPAEFLSRFTEALQKY TRVDPTSREETIVLNNHFISQSAPNI QHKLKKAEDGPQTPQQDLLNLTFK VFNNREEQIKLDKAQRDCAKYQLL AVAIHQPSHSTQGHKKPNGSNPPGP CFKCSKEVTYLGVQLSPGAQAMTP AQATLINSLPLPSSKNEILSFLRLEGF FRIWIPNFALLAQPLYEAAKGPLNE PLSPIHNILPSFCKLQTALITAPALSL PDLSQPFVLYTTKNQGIALGVLGQQ KGNPPSFDPVAYLCKQLDNTVKGQ PTCLKASSAVAVLPLESKKLTFGQS TTIHSPHNLQDLLSSWALSSLSPSQI QSLYALFIKNPEFSLAKSAPLNLASL LPISSSPPTHSCTDILDHLQPQFPNISS KPLTNPDDQLFIDDSSSRAPGSPKIV GYAVVTLNHVIEAKPLPPETSSQKA EL\ALTRALTLSKDKQHWLISEPVQ |
| 4815  | 10312                                   | A | 5119                                | 2                       | 697  | RPPPSSVHST  HGRLLLLLLLLLLLPCCEKTTEGEAM KEITAGLPVKVV\VDVLRQASKACV VKREFKKAEQLIKHAVYLARDHFG SKHPKYSDTLLDYGFYLLNVDNICQ SVAIYQAALDIRQSVFGGKNIHVAT AHEDLAYSSYVHQYSSGKFDNALF HAERAIGIITHILPEDHLLL\ASSKRV KALILEEIAIDCHNKETEQRLLQEAH \DVHLSSLHLASKSYGDLAVVVLVH MSLLKSY   |
| 4816  | 10313                                   | A | 5120                                | 3                       | 277  | EEEAAPPPGRERARGKGGDRPRGG<br>NPEHQCGGTPRAEGSSTA/A/PPTCT<br>SSSRTPASTVGPEPCGAGSAATAPG<br>PELSGQNQMGRGPPVEDTE  |
| 4817  | 10314                                   | A | 5121                                | 1                       | 337  | GTSSCVREVVQAMGKKKVLVKVH<br>LKDKFVIDVDKNISISDVTPSSLVVL<br>RNDSYTLHKILPNKVHSLVSLMMV<br>NTVPY/STNETIVSLDGPMVTILFSD<br>KLSFTAPQLYIFTG   |
| 4818  | 10315                                   | A | 5122                                | 2                       | 302  | ARGLPFFTRNDFSVWTIA/RNKCVG<br>LELSKITMPIAFIQPLIFLHRITEYME<br>HVYLIHRAFCQPQPLERMQVGLKG<br>ARQEFVMKVMPLACLATQSWGPR<br>HL   |
| 4819  | 10316                                   | A | 5123                                | . 3                     | 346  | HENWKKLLPCSSKAGLSVLLKADR<br>LFHTSYHSQAVHIRPVCRNARCTSIS<br>WELRQTLSVVFDAFITGQGKKDWS<br>LF/RMFSRTLTEPCPLASESRVYVDI<br>TTYNQDNETLEVHPPP  |
| 4820  | 10317                                   | A | 5124                                | 213                     | 425  | QNSQGKLFSSGCLPFCGSNTKGIILK<br>YIQNH/KKPQIAKATLSKKNKAGSIT<br>LPDFKIYYKALKPKITWYWH  |
| 4821  | 10318                                   | A | 5125                                | 1                       | 356  | GTSTRIIFYRDGVSEGQRQQGLHHE MLAIREACIKLQKDYQPGITFIVVH NIHHTRLLCSDKNHPLGKRGNSPTG SNCGTKITHPTEFDFYLRRHAGIQG TSRPSYYHVLWD\DNRFFS   |
| 4822  | 10319                                   | A | 5126                                | 1                       | 238  | НМНЅННМНЅНТРНА/ННТННМНЅ   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | ННМНЅНТННМНЅННМНЅНАРНАL<br>ТРНАСТНТННМНЅННМНЅННМНА<br>LTPHACTHTPH   |
| 4823  | 10320                                   | A | 5127                                | 180                     | 405  | IWGEQDTFHSMAKWIIHLNVNHKT VKLLDDNIG/IKRGDLG/VDNEFLGT TPKAQSMEETIDKLDFIKMKNFCSV KDG   |
| 4824  | 10321                                   | A | 5128                                | 61                      | 85   | PS*NYPP*KGITFGPLNKK   |
| 4825  | 10322                                   | A | 5129                                | 3                       | 2004   | RRRRPASPPAGLALAPRSPSASPEP REGETLSPSMQREEGFNTKMADGP DEYDTEAGCVPLLHPEEIKPQSHYN HGYGEPLGRKTHIDDYSTWDIVKA TQYGIYERCRELVEAGYDVRQPDK ENVTLLHWAAINNRIDLVKYYISKG AIVDQLGGDLNSTPLHWATRQGHL SMVVQLMKYGADPSLIDGEGCSCI HLAAQFGHTSIVAYLIAKGQDVDM MDQNGMTPLMWAAYRTHSVDPTR LLLTFNVSVNLGDKYHKNTALHWA VLAGNT\TVISLLEAGANVDAQNI KGESAPDLAKQRKIVWIINHLQEAR PAKGYDNPSLPRKLKADKEFRQKV MLGTPFLVIWLVGFIADLNIDSWLI KGLMYGGVWATVQFLSKSFFDHS MHSALPLGIYLATKFWMYVTWFF WFWNDLNFLFIHLPFLANSVALFYN FGKSWKSDPGIIKATEEQKKKTIVE LAETGSLDLSIFCSTCLIRKPVRSKH CGVCNRCIAKFDHHCPWVGNCVG AGNHRYFMGYLFFLLFMICWMIYG CISYWGLHCETTYTKDGFWTYITQI ATCSPWMFWMFLNSVFHFMWVAV LLMCQMYQISCLGITTNERMNARR YKHFKVTTTSIESPFNHGCVRNIIDF FEFRCCGLFRPVIVDWTRQYTIEYD QISGSGYQLV |
| 4826  | 10323                                   | A | 5130                                | 3                       | 144  | HEKYHKN\TALHWAVLAGNTTVIS<br>LLLEAGANVDAQNIKAILRCHMAL  |
| 4827  | 10324                                   | A | 5131                                | 148                     | 325  | RQGKECKIHCKKKLSPGIRSYPVEN/<br>F/VDTMYDYLQPAYYKLNDLTNAD<br>PCAVRYLLFDQN  |
| 4828  | 10325                                   | A |                                     | 175                     | 405  | NILNSQFSTFLNDYVEFFVVFKIFNFI<br>IIIIF*DRVSICCPGWSIMVQSWLTAA<br>LTFGRR*SSNLSLPSSWDYRRVP   |
| 4829  | 10326                                   | A |                                     | 14                      | 26   | YSPHEVGWKGRNREKMFCSEINVV<br>FPDSVCQEMGFHHVAPAGLELMSS<br>SDSPASASQSAGITSVSHHSCLYTSK<br>GVE*FTGIIFSS  |
| 4830  | 10327                                   | A |                                     | 177                     | 454  | PLLERAKIGPRPEKPMETRQGWGPF<br>SPKVPGQKKFWG*LAPIPSPGMHPN<br>PILGPMV*EGGP*PPGILGPP*PYGKP<br>LF*RKRGSNGGPYLQ  |
| 4831  | 10328                                   | A |                                     | 3                       | 92   | NAWRTATEEWWTEDWNEDCSEP*<br>HFTYVI   |
| 4832  | 10329                                   | A | 5136                                | 1                       | 442  | PLIMNSIKSFSDHAQCGR\EFDRQED<br>DIHLVTLCVTELNDREENENHFPVI<br>YGIAVNIKTAEIYRASFQDRGPEEQL   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | RAARTLAGGPMISIYDAETEQLRI\G<br>PYSWTPFPHVDFW\LHQDDKQIFEN<br>LSTSPLAEPPHFVEHIRSYLD   |
| 4833  | 10330                                   | A | 5137                                | 177   | 566  | EPFWSLSYLSLRRGGRNVRLCRLSA<br>LVFCQFKAMLLTLTAGNNKTAEIY<br>RASFQDRGPEEQLRAARTLAGGPMI<br>SIYDAKTEQLRIGPYSWTPFPHVDF<br>WLHQNDKQILKGRVYRLGKS*ISAP<br>WFPHL  |
| 4834  | 10331                                   | A |                                     |   | 981  | PLLVEGR*VRLPQSAGDLVRAHPPL EERARLLRGQSVQQVGPQGLLYVQ QRELAVTSPKDGSISILGSDDATTCH IVVLRHTGNGATCLTHCDGTDTKA EVPLIMNSIKSFSDHAQCGRLEVHL VGGFSD\DRQLSQKST\HHFLIEFDR QEDDIHLVTLCVTELNDREENEN\H FPVIYGI/AVILLSLTAVNIKTAEIYR\ ASFQRSGVREEQA/LRAARKL*AGG PMIS\IYDAETETTS**DPYFLGHPFP HVGF\WL\HQD\DKQILDESFHFRPL AE\PPHF\VEHIRSTLMVF*KNTPSPA \NTLFPGNKALLYKKNEDGLWEKIS SPGS |
| 4835  | 10332                                   | A | 5139                                | 1   | 405  | AYVTVCNQCGRESKLLSKFYELEL<br>NIQGHKQLTDCISEFLKEEKL*GDN<br>RYFCENCQSKQNATRKIRLLSLPCT<br>LNLQLMRFVFDRQTGHTKKLNTYI<br>GFSEILDMEPYVEHKVW*PTSLNSM<br>LSLKLGGMCMLT  |
| 4836  | 10333                                   | A | 5142                                | 2   | 204  | ETGFCHVVQAGLKLLGSSDLPASAP<br>QSAGITGMCHCAQPTKVSVASKVF<br>KGSHKD*ILT*GYANKGA  |
| 4837  | 10334                                   | A | 5143                                | 1   | 360  | QQLTVLVAHLGVTLMDQRGYHWL<br>LKSLMTQYQGLLYENP*ITLEIVNTL<br>NPGTLLPNESVPGSALHCRVDVVHE<br>MLSIQRDLTDHTLRDSDIEYFIDRSG<br>FILGGDPLSGVCSSDFGLST   |
| 4838  | 10335                                   | A | 5144                                | 36  | 380  | FVALMGHKMSHNKFKIEIIRSMFSN<br>HNRSQ*SK*IKEIYKCGN*HTSK**M<br>H*GKKSLAKLENNEMNENESTT*Q<br>NLWDAAKTALNEQFML*MPILKKG<br>*MSQINKPTFHLKTIK  |
| 4839  | 10336                                   | A | 5145                                | 1   | 362  | ELNLPAPELPRKRTENLFLQLAEYV AHSLNVTS*YVCEGTTMGD*WPWE TQELEPTDPVPDIIPVQKAQTSNFW VLKTSINGQYCIPRKGKDFTIPVGRL N*LGQKLYKSITGTQGQSPG   |
| 4840  | 10337                                   | A | 5146                                | 2   | 428  | MFLLVVINLHILFVF*FKLFSWS*AIF<br>L*FLF*FMSESENIYYAEIGIIITIVVT<br>LKSLIIATYCINPSSHCYKVYLVLSY<br>LYCIIVNFDIYFLLLCVPFCYFSLIISL<br>SPLFLLIYMIFLYIHFILLLFVIFYTFIP<br>FSFY   |
| 4841  | 10338                                   | A | 5147                                | 3   | 361  | TLFQL*DLRKQRLEDLSTLIPRIYPG<br>WKCRTHFLLMKKSQIVIAGWYRRY<br>AQHKRNQPTKSTVLVLQSYIRGRK<br>ARKILRELKHQKRCTEAVTTIAAY   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  WHGTHALTETERLKEEARRKH  |
|---|---|---|-------------------------------------|---|--|--|
| 4842  | 10339                                   | A |                                     | 1   | 424  | VHLTADDKVIIAGLWSIVNAQDAV<br>GETLGRLQGVYPWIQRFFGSFGNLS<br>SASAIVVNPKVTAHGKNVLTSLVD<br>AITHLVDLMGTFAQLRELH*DKLYE<br>DPENLHTLGHVLVTVLVIHFGT*FT<br>AEVQASWLMMDTERANAL                          |
| 4843  | 10340                                   | A | 5149                                | 24  | 452  | APSPDAMG/HSLWGKVNVEDAGGE<br>TLGRLLVVYPWTQRFFDSFGNLSSA<br>SAIMGNPKVKAHGKKVLTSLGDAI<br>KHLDDLKGTFAQLSELHCDKLHVD<br>PENFKLLGNVLVTVLAIHFGKEFTP<br>EVQASWQKMVTGVASALSSRYH                       |
| 4844  | 10341                                   | A | 5150                                | 38  | 501  | APSPDA\MGHFTEEDKATI\TSLWGK<br>\VNVE\DAGGETLGRLLVVYPWTQR<br>FFD\SFGNLSSASAI\MGNP\KVKAH<br>GKKVLT\SLGDAIKHLD\DLKG\TFA<br>QA*SELH\CDK\LHVDPENFKAPGG<br>NVAGDPFLAIPFSAKEFHPLKVARL<br>SWAERWVTW |
| 4845  | 10342                                   | A | 5151                                | 2   | 198  | KVRPPPLKKTFDSVDYRVLSEVDFE<br>ERFAELPEFRPEDDLSSFS*PFLSPPP<br>CMSTALAHGDFSL  |
| 4846  | 10343                                   | A | 5152                                | 1   | 119  | DIMTGPHDEVAAKNIQLTNEIQTLE<br>TE*HEATKEFQVLS  |
| 4847  | 10344                                   | A | 5153                                | 3   | 83   | RMVLRLMPLSTDEALCFHAMFQPF<br>LDMIHEAQQAMDIHFHSPDFQHPPT<br>EFIREGDDDRTVLREMHHI*TG*LR<br>VKWRCEEWR*I  |
| 4848  | 10345                                   | A | 5154                                | 2   | 370  | GAARLDERTKEGSDDEDSG*GARA ELEGNKEGESEGQYKAKGERSAWS KLRTEIRQKAEESIDGIKVDDPS*IS MKATYTTMKIS*RQIRKIRQREKKN TAKGEGQERQNKNLSHKRHDISC   |
| 4849  | 10346                                   | A | 5155                                | 106   | 344  | RPCQQMQINVIHPINRMDKKHVIIPI<br>DTSDKI*HPFMIQTLNTLCI**MYLSI<br>IKAIYDPYTADIILTG*TFNAFFSTI  |
| 4850  | 10347                                   | A | 5156                                | 198   | 474  |  |
| 4851  | 10348                                   | A | 5157                                | 1   | 131  | PQEVPQSFGPPGDKAGC*GAGKMS<br>PRERGGFLKCAEGGHPAPA  |
| 4852  | 10349                                   | A | 5158                                | 104   | 440  | FSKIYHFLLCCCFVLSKNCPILLHFL<br>KIYLLALGNINISYFYSYHSKTLATG<br>LKLTDDSQHISHGTSGSRFKCLLLS<br>KAVLMSSLPAVYS*LLKLLDVREVS<br>NMVHDTLGIL   |
| 4853  | 10350                                   | A | 5159                                | 2   | 393  | EVWPRGLMGYVTVTEPSAVLVVRG<br>VRDRLVITYPHEHHALTSSRLYLLM<br>LFVGDPSGSGSNGSPDS*GLLLFRN<br>DQAHIDLFVCFSVILSCFFLFLSLCEL<br>LWNAKQAMDQRQEQRRHLQEMTK<br>MARRPF                                     |
| 4854  | 10351                                   | A | 5160                                | 2   | 154  | FRDGVSLHCSGWS*TPGLK*SSCLS<br>LPKCWDYRHEPPLLFPLWRAIGNIY   |
| 4855  | 10352                                   | A | 5161                                | 142   | 399  | HLLTYSEMFLGGVRYFLQSTLPADL<br>SKHAYLYAP*LRLFA*RYTSAFTEW<br>THSANKTVCLMPKLYELTYVGIDTL<br>ATPVIKRYYCS   |

| SEQ ID             | SEQ ID         |               | SEQ ID NO:            |                         |                     | Amino acid sequence ( X=Unknown; *=Stop                                 |
|--------------------|----------------|---------------|-----------------------|-------------------------|---------------------|---|
| NO: of nucleo-tide | NO: of peptide | tho           | in USSN<br>09/770,160 | location of first codon | location of last    | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence           | sequence       |               | 037770,100            | for peptide             | amino acid of       |   |
|                    | ĺ              |               | 1                     | sequence                | peptide<br>sequence |   |
| 4856               | 10353          | A             | 5162                  | 3                       | 410                 | HEG*PTFSSILHPHPGAWAQLQ*PSQ  |
|                    |                |               |                       |                         |                     | ATTALFTLISVA*QQAGCSPQPGAG   |
|                    |                |               |                       |                         |                     | NTPPPPPNSGTLTPSPACAHWAQC*   |
|                    |                |               |                       |                         |                     | ANKDEFSVPGPQCLWPR*GPSYTAS   |
|                    |                |               |                       |                         |                     | LPQALRARPSQMTRVPQAPPPTGPG<br>PVVSPCANTN                                 |
| 4857               | 10354          | $\frac{1}{A}$ | 5163                  | 168                     | 435                 | IIAQ*N*FLKNNFQ*TI*K*NKTILFTT  |
|                    |                |               |                       |                         | 100                 | RSK**I*QKQQKNLYLEKYKTLLKEI  |
|                    |                |               | ]                     |                         | ļ                   | KDLNKWKNISCSWIGTLSIDKLVTL   |
|                    |                | <u> </u>      |                       |                         |                     | SKLNYRVNVI  |
| 4858               | 10355          | A             | 5164                  | 2                       | 427                 | QIFRYLIMEKEQEHTYRGFKTVNR  |
|                    |                |               | )                     |                         | }                   | WTDAYDYAQHYSEASVASKDVSV   |
|                    |                |               |                       |                         |                     | W*FHDYLGMSRHPDVLQA*QETLQ  |
|                    |                | 1             |                       |                         |                     | RHGAGSGGSRNLSGTRNCHVELEH<br>ELADLHLKDSSLIFSFCFIANDCTLF                  |
|                    |                |               |                       |                         |                     | TLAKILPGREIHSDACQHAFM   |
| 4859               | 10356          | A             | 5165                  | 11                      | 1232                | MAGAATGSRTPGRSELVEGCGWRC  |
|                    |                |               |                       | }                       |                     | PEHGDRVAELFCRRCRRCVCALCP  |
|                    |                |               |                       |                         |                     | VLGAHRGHPVGLALEAAVHVQKLS  |
|                    |                |               |                       |                         |                     | QECLKQLAIKKQQHIDNITQIEDATE  |
|                    | }              |               |                       | 1                       |                     | KLKANAESSKTWLKGKFTELRLLL  |
|                    |                |               |                       |                         |                     | DEEEALAKKFIDKNTQLTLQVYREQ   |
|                    |                |               |                       |                         |                     | ADSCREQLDIMNDLSNRVWSISQEP<br>DPVQRLQAYTATEQEMQQQMSLG                    |
|                    |                | 1             | l                     |                         |                     | ELCHPVPLSFEPVKSFFKGLVEAVES  |
|                    |                |               |                       |                         |                     | TLQTPLDIRLKESINCQLSDPSSTKP  |
|                    |                |               |                       |                         |                     | GTLLKTSPSPERSLLLKYARTPTLDP  |
|                    |                |               |                       |                         |                     | DTMHARLR\MSADRLTVRCGLLGS\   |
|                    |                |               |                       |                         |                     | LGPVPVLRFDALWQVLARDCFATG  |
|                    |                |               |                       |                         |                     | RHY\WEVDVQEAGAGWWVGAAY  |
|                    | }              |               |                       |                         |                     | ASLRRRGASAAARLGCNRQSWCLK<br>RYDLEYWAFHDGQRSACGPATTST                    |
|                    |                |               |                       |                         |                     | GSASSWTTRPASSPSTT   |
| 4860               | 10357          | A             | 5166                  | 115                     | 447                 | MSSWARLCESPVVWYF*HVLFVCL  |
|                    |                |               |                       |                         |                     | HKLRALISQQFLTGINCQLSDPSSTK  |
|                    |                |               |                       |                         |                     | PGTLLKTSPSPERSLLLKCKTPGSGD  |
|                    |                |               |                       |                         |                     | RVETVEMVGCWVEEDHGNGGPSFF  |
| 4861               | 10358          | A             | 5167                  | 1                       | 422                 | LIRIYLFIYLF   |
| 4001               | 10336          | A             | 3107                  | 1                       | 423                 | ADMKAHHLLHSGGMGFSCECSTGF<br>VKHS*LIEHIRTHTGEKPFQCPKCDK                  |
|                    |                |               |                       |                         |                     | SFRLKAQLLSHHGLLTGDRPFHCPE   |
|                    |                |               |                       |                         |                     | CDKNLRERGHMLRHQRIHRPERPF  |
|                    |                |               |                       |                         |                     | ACGYCGKGFIYKSKLAEHIRVHTKS   |
|                    |                |               |                       |                         |                     | CPAANELDIKKMLHPLV   |
| 4862               | 10359          | A             | 5168                  | 481                     | 908                 | EGSQWEAQKALAIQPVPCGAVRVP  |
|                    |                |               |                       |                         |                     | WTTSISSPASIPKQSVGKGCDCLR*L  |
|                    |                |               |                       |                         |                     | GDFAPARGEEACECHTEPFRNSRGV   |
|                    |                |               |                       |                         |                     | GGAWARPGYLVLSLLSLQCPDSAC  |
|                    |                |               |                       |                         |                     | NQDLLAYLQRIALYCHQLNICSKVK<br>AEVQNLGGELVVSGVSIS                         |
| 4863               | 10360          | A             | 5169                  | 2                       | 2799                | EMTAVHAGNINFKWDPKSLEIRTLA   |
|                    |                | -             | -                     |                         |                     | VERLLEPLVTQVTTLVNTNSKGPSN   |
|                    |                |               |                       |                         |                     | KKRGRSKKAHVLAASVEQATENFL  |
|                    |                |               |                       |                         |                     | EKGDKIAKESQFLKEELVVAVEDV  |
|                    |                |               |                       |                         | l                   | RKQGDLMKAAAGEFADDPCSSVKR  |
|                    |                |               |                       |                         | l                   | GNMVRAAPALLSAVTRLLILADMA  |
|                    |                |               |                       |                         | ļ                   | DVYKLLVQLKVVEDGILKLRNAGN<br>FODLGNOVYALVBEVDYLNIMAAV                    |
|                    |                |               |                       |                         |                     | EQDLGNQYKALKPEVDKLNIMAAK  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 |   | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | RQQELKDVGHRDQMAAARGILQSN VPILYTASQACLQHPDVAAYKANR DLIYKQLQQAVTGISNAAQATASD DASQHQGGGGGELAYALNNFDKQI IVDPLSFSEERFRPSLEERLESIISGA ALMADSSCTRDDRRERIVAECNAV RQACRTCVSEYMGNAGRKERSDAL NSAIDKMTKKTRDLRRQLRKAVMD HVSDSFLETNVPLLVLIEAAKNGNE KEVKEYAQVFREHANKLIEVANLA CSISNNEEGVKLVRMSASQLEAGCP QVINAATWALAPKPQSKLAQENMD LFKEQWEKQVRVLTDAVDDITSIDD FLAVSENHILEDVNKCVIALQEKDV DGLDRTAGAIRGRAARVIHVVTSE MDNYEPGVYTEKVLEATKLLSNTV MPRFTEQVEAAVEALSSDPAQPMD ENEFIDASRLVYDGIRDIRKAVLMIR TPEELDDSDFETEDFDVRSETSVQT EDDQLIAGQSARAIMAQLPQEQKA KIREQVASFQEEKSKLDAEVSKWD DSGNDIIVLAKQMCMIMMEMTDFT RGKGPLKNTSDVISAAKKIAEAGSR MDKLGRTIADHCPDSACKQGLVA YLQGIALYCHQLNICSKVKAEVQNL GGELVVSGNCDTCGALQGLKGWPP PLCLATHWVDSAMSLIQAAKNLMN AVVQTVKASYVASTKYQKSQGMA SLNLPAVSMKMKAPEKKPLVKREK QDETQTKIKRASQKKHVNPVQALS EFKAMDSI |
| 4864<br>4865                                | 10361<br>10362                          | A | 5170<br>5171                        | 3 | 458<br>764   | GPLCIALALQEFGTRRRWACRSLSS<br>SGRRSLFRRMGSVKAVKNKAYFKR  |
| 4866  | 10262                                   | A | 5170                                | 0 | 400  | YQVKFRRR\RKGKTDYYAR*RLVIQ<br>DKNKYNTPRYRMIV\RVTNRDIICQI<br>AYARIEGDMIVCATYAH*LPKYGV<br>KVGLTNYAAAYCTGLLLARRLLNR<br>F\GMDKIYEGQVEVTGDEYNVESID<br>GQPGAFTCYLDAGLARTTTGNKVF<br>GALKGAVDGGLSIPRSTKRFPGYDS<br>ESKEFNAEVHRKHIMGQNVADYM<br>RYLMQEDEDAS  |
|   | 10363                                   |   | 5172                                | 8 | 400  | PLASFDTGDVECALCMRLFYEPDTT<br>PCGHTLCLRCL*RCLYHNAKCPLCK<br>DGLSQ**ASIKYSYNVIVEELIAKFL<br>PEELKEREKLYE*EMEELYNLNNNV<br>PILMCTMAYANVTCPLHMFEPCYR<br>LMIRIW  |
| 4867  | 10364                                   | A | 5173                                | 2 | 400  | SLPLASFNTCNVECALCMRLFYEPV<br>TTPCGHTFCLKCLERCLDHNAKCPL<br>CKDGLSQCLASRKYIKNVIMEELIA<br>KFLPE*LNERMKLYEYEMEELSNLN<br>NNVPIFVCTMAYPTDPCPLHIFEPCY<br>RLMIRIC  |
| 4868  | 10365                                   | A | 5174                                | 1 | 216  | AGRTGRPEERAPESKSGSGSESEPSS<br>RGGSLRRGGEACGTSDGGPSPF*GS<br>SVVSFTLLSYLGYYSYLLSTV   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|---|
| 4869  | 10366                                   | A   | 5175                                | 301   | 446  | SYFSYIILIIRGNESEGGFFEN*YFCL<br>LINGGSWSGEPPRRNSHTFNC  |
| 4870  | 10367                                   | A   | 5176                                | 155   | 404  | AAVPSRILKQYSHPNIVRLIGVCTQK<br>QPIYIVMELVQGERGALSSR*GAQP<br>GQVAALPQEAQQGSSPPAGGDFLTF<br>LRTEGAR   |
| 4871  | 10368                                   | A   | 5177                                | 172   | 443  | TGMIRGPWTKVGPGAIEKPPVGDK<br>VPNGCPKSLGNRQPCF*VLEVNEPY<br>VPKKFKAEPFPFHANICPLSEKERQF<br>RKQTALVDL*KPKPR  |
| 4872  | 10369                                   | A   | 5178                                | 3   | 428  | PDQTLLCCCAEMGSHCVAQAGLEL<br>LGLSDLPILASQSAAITGVGHHACP<br>VLGS*RPSQMLCPFPWWLLLSATFY<br>LAVPHLLPCLLFQPHSLRCSRSSSA<br>NLPVVFSPGAGCLSLLSCMECSSFP<br>AKVLVIPFPSERPPCS  |
| 4873  | 10370                                   | A   | 5179                                | 2   | 432  | NIVSQNNDLPQTVIWMGDCIISLETR<br>IQMQCDWNTSDFCVTPHS*NETEH<br>HWEIKCHLVGREENLTLDIVKVKE<br>QVFEASQAHLTLLPGTDIFSEAANG<br>LSAINSLKWIKTTGNSTLVNFVLIIIC<br>LFLAAAFSPEAASASVD   |
| 4874  | 10371                                   | A   | 5180                                | 163   | 585  | VEVRAHPKKRQRKKKEKKKSDRYS<br>SSSSSSSSSSSSSSSSEDEDKK\KENR<br>RKKKKNRSHKSSESSMSETESDSKD<br>SLKKKKKSKDGTEKEKDIKGLSKK<br>RKMYSEDKPLSSESLSESEYIEEVQA<br>KKKKSSEEREKATEK   |
| 4875  | 10372                                   | A   | 5181                                | 18  | 566  | AEQSGEAARGPVAGPLRPSLWPGFP<br>RRATVCSVQHHGEAGQSGWPYMN<br>PNSNGEIKGSQSQSSGPTIQDYLNRP<br>RPTWEEVKEQLEKKKKGSKALAEF<br>EEKNE*ELEERTGKTQGEIVKWK*E<br>LIQKKDRERKKKRRNLVGSSSDSED<br>EDKKQGKRRKKKKNRSHKSSESSM<br>SETESDSKDSL |
| 4876  | 10373                                   | A   | 5182                                | 27  | 382  | SVILSFFFFFFYIAWATVRLCLKQTN<br>ENNDKRDLTSLKVVRK*TLNLHPSI<br>KAMIIRLYFEQLYDNRLANLDEMDI<br>FLATQKLPKLAQEEVKNFSRCVTM<br>DYVNNQNL*TNKGPEPDD  |
| 4877  | 10374                                   | A   | 5183                                | 2   | 342  | GRSCDPKSVGQTLCVALLSVPLPGD<br>PGQRKLPSQNSEEEL*SQKCGPNPM<br>CCSFPVPLAGGPGHSRRSTQSRTR*L<br>KPQLPGWRTEKGAPEEIGKMMLQV<br>IDERPGSALSCRC   |
| 4878  | 10375                                   | A   | 5184                                | 2   | 147  | AETGFHHASQDGLDLLTS*STRLGL<br>PKCWDYRREPQRPADTWFLKSTT  |
| 4879  | 10376                                   | A   | 5185                                | 8780  | 9035   | LALQVHTMTPSKFFFIFLVETGFHH VSQDGLDLLTF*STRLGLPKCWDYR SEPPRPAYFYIFLRRSLSLSPRAGVA VSRDHATAL  |
| 4880  | 10377                                   | A   | 5186                                | 75  | 355  | SNKNPSISCPRTWGECVCQATSRST<br>WFLYPMPSYAPIKPTPGDVPGTAPS<br>GRPDSTPS**HRLQGTLPKPAPPLLG<br>VFPKPLLAPLFPEGPGP   |
| 4881  | 10378                                   | A   | 5187                                | 262   | 354  | VWSPPPLTWCLVCQCRYY*PGLLM  |

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|---|---|---|-------------------------------------|-------------------------|--|--|
| 4882  | 10379                                   | A | 5188                                | 1                       | 104  | ESETLPGGVAHACNPITLGG*GGRIT<br>RSGV*DQP   |
| 4883  | 10380                                   | A | 5189                                | 1                       | 144  | RDKVFALSHRLECSGAIIAHYNLQL<br>LG*NNHRVSDSPVAGMAGVCHHT   |
| 4884  | 10381                                   | A | 5190                                | 99                      | 241  | CFPGAWVRLQLTQASDGPWQCSSS QRLHHAPHVVTLYLCCAFSPCSPVK LRDFESAVNNFEKALERAKLVHNN EAQQAIISALDDANKGIIRELRKTNY VENLKEKSEGEASLYEDRIITREKD MRRVRDEPEKVVKQWDHSEDEKE TDEDDEAFGEALQSPASGKQSVEA GKARSDLGAVAKGLSGELGTRSGE TGRKLLEAGRRESREIYRRPSGELE QRLSGEFSRQEPEELKKLSEVGRRE PEELGKTQFGEIGETKKTGNEMEKE YE*SHR*R*GSSVLVLDGDIAQEHG GKDGAEQLSDASLGPGSDYSSHKL LMGPGSARVARGSIMHHTLSHSTC VVPSPLALQ |
| 4885  | 10382                                   | A | 5191                                | 303                     | 427  | IVLFEKKIFFFFFETGSCSVPKAGVQ<br>WCGHSSLQP*PTGLM  |
| 4886  | 10383                                   | A | 5192                                | 82                      | 352  | RVPERVLPRPIPPASCPVSPPASRPL*<br>GTPRAAPETRRPRTARDPRGLRW<br>QTQPAAPLLASPGPGVAPVASGAPI<br>SRNDFQLCKARMLL  |
| 4887  | 10384                                   | A | 5193                                | 1                       | 248  | QKLKKLARHGGACACGHKLLGWL<br>RW*DHMSLRGQGCSES*SCRCTPA<br>WTTE*DPVYQHKILSL*DFLI*KASS<br>NRSSVIYEL   |
| 4888  | 10385                                   | A | 5194                                | 3                       | 370  | AQWRVDSDGAPKRIADSATSPKLL<br>YVDRVVQEILETERTYVQDLKSIV*<br>DYLDCIRDQTKLPLGTEERSALFGNI<br>QDIYHFNSELLQDLENCENDPVAIA<br>ECFVSKSEEFHIYTQYCTNYPR   |
| 4889  | 10386                                   | A | 5195                                | 28                      | 183  | YDRKRPVGKEKIGKLDCMKT*NFC<br>ASKNTIKEMKRQRTVWEKIFAHYIS<br>ERK   |
| 4890  | 10387                                   | A | 5196                                | 1                       | 681  | MHPIGIALSKVPVESKEGDIMSHTG GSVPYLDNLNKASVCRGQSCRVFQ VKEMVTQVESENNQEEQKQVRLPE SRLTPWEVWFIGKEKEERDRLQLK ALEFKEDWKLLKRRVTKKSGSVSV SISSQG\NLTVCDCCESFLLTKPVSC KHLIKSHSCPALAVAS/CQRPEGYW SDCGTRSHSDYADEEDSFVSDSSDQ VSSRRTVTHSYAPPQSQPHHRHTQT GTTATYL   |
| 4891  | 10388                                   | A | 5197                                | 1                       | 2862   | MPGPLGLLCFLALGLLGSAGPSGAA PPLCAAPCSCDGDRRVDCSGKGLT AVPEGLSAFTQALDISMNNITQLPE DAFKNFPFLEELQLAGNDLSFIHPK ALSGLKELKVLTLQNNQLKTVPSEA IRGLSALQSLRLDANHITSVPEDSFE GLVQLRHLWLDDNSLTEVPVHPLS NLPTLQALTLALNKISSIPDFAFTNL SSLVVLHLHNNKIRSLSQHCFDGLD  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   | -                                       |   |                                     |                         |  | NLETLDLNYNNLGEFPQAIKALPSL KELGFHSNSISVIPDGAFDGNPLLRT IHLYDNPLSFVGNSAFHNLSDLHSL VIRGASMVQQFPNLTGTVHLESLTL TGTKISSIPNNLCQEQKMLRTLDLS YNNIRDLPSFNGCHALEEISLQRNQI YQIKEGTFQGLISLRILDVSRNLIHEI HSRAFATLGPITNLDVSFNELTSFPT EGLNGLNQLKLVGNFKLKEALAAK DFVNLRSLSVPYAYQCCAFWGCDS YANLNTENNSLQDHSVAQEKGTAD AANVTSTLENEEHSQIIIHCTPSTGA FKPCEYLLGSWMIRLTVWFIFLVAL FFNLLVILTTFASCTSLPSSKLFIGLIS VSNLFMGIYTGILTFLDAVSWGRFA EFGIWWETGSGCKVAGFLAVFSSES AIFLLMLATVERSLSAKDIMKNGKS NHLKQFRVAALLAFLGATVAGCFP LFHRGEYSASPLCLPFPTGETPSLGF TVTLV\LLNSLAFLLMAVIYTKLYC NLEKEDLSENSQSSMIKHVAWLIFT NCIFFCPVAFFSFAPLITAISISPEIMK SVTLIFFPLPACLNPVLYVFFNPKFK EDWKLLKRRVTKKSGSVSVSISSQG GCLEQDFYYDCGMYSHLQGNLTVC DCCES\FLLTKPVSCKHLIKSHSCPA LAVASCQRPEGYWSDCGTQSAHSD YADEE\DSFVSDSSDQ\VQACGR\AC |
| 4892  | 10389                                   | A | 5198                                | 2                       | 413  | FYQ\SRGFP\LVRYAYNLPRVKD  VDFFFFLRRSLATVAQAGVQWRDL  GSLQAPPPGFTPFSCLSLPSSWDYRR  PPPRPANFFVFFFF**RWGFTVLAR  MISIS*PRDPPTSASQSAGITGVSDRT  RLDFKKKKKYCGKKDIMYRKVYTS  LIQLTKKSLIH  |
| 4893  | 10390                                   | A | 5199                                | 1                       | 142  | RKMFGNGRARSGVIVLPCGKGYQS<br>**GGQAVGSGSASCLPLSLCTFP   |
| 4894  | 10391                                   | A | 5200                                | 1                       | 375  | GEATMNPSHEAEVVCDVPTWWPP<br>VSTR*MGGRE*RKERAEKGRGKGG<br>MEKEGAGERRGKEKNGDSRERGRE<br>GKSVTDNST*GAAAGLPQSPCPIQA<br>RGVQSPRPQAMSRGEPEYSGIGGW<br>GSGEA   |
| 4895  | 10392                                   | Α | 5201                                | 109                     | 331  | PLYCSPGASYMTLTALGPTQTQVPE<br>QRLFVTCILCQEEQEVKVESRAMVL<br>AAFVQRSSVLSKNRCKFI*DPGKS  |
| 4896  | 10393                                   | A | 5203                                | 2                       | 168  | FFLDSTLKA*AIKAKINKWNDVKLK<br>SFFKTKETINKM*QPMVWENIFANH<br>LSDKG   |
| 4897  | 10394                                   | A | 5204                                | 107                     | 357  | DLRWYSSFLWMCCIPGAKWHPING<br>SSCVMMGMIKYDFTGHWIVKHIGL<br>AADLDSFYEYLLKSYILFGE*DDL*<br>MFNAAYQSIQ   |
| 4898  | 10395                                   | A | 5205                                | 3                       | 376  | CQSQVPTDHGGQPPGSHPGWKPGP<br>DLPPRFPDPEPSRPGN*GLLGPALCP<br>SDLYAFGPQGISVNQGLPQWRPGW<br>GHPWRLPEPDS*APAIPQPLAEPVL<br>WGWGGQRPRVPQQLPTAERCCSDF   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
| 4899  | 10396                                   | A | 5206                                | 1   | 262  | S QNIFLHLFFCSFTAQKYPMVHLLQK SDNSFNQELLKSMVKSIKMNDVYG PMSQILETLNKCPHFKRQR*VLLLD EYIVLLGRFILFA   |
| 4900  | 10397                                   | A | 5207                                | 2   | 296  | NGTHASYGAFYLEYSLLAEFTLVV<br>KHKLPGVYVQPSYRSALMWVGVL<br>SMWEGG*RQGLVRSTVGLGGAVLS<br>SEDRSWGVGSLLSRASAPRLPLAHL<br>RC   |
| 4901  | 10398                                   | A | 5208                                | 30  | 280  | FYYAFKEEIIPVLYSLFQKIETGGILL<br>NSALLLIPKST*YRRPYKKGKLNYR<br>PKSFVNINVKILNRILANQIQKCIKRI<br>TYYS  |
| 4902  | 10399                                   | A | 5209                                | 1   | 277  | NFSSLLIHGRMHTGEKPYECKNCGK<br>AFTSAKSLQNHGRTHTG*KPCECKQ<br>CGKAFICSSSCQRHEETHSVNMHSV<br>ILIPLKHRKRVGKGPLR   |
| 4903  | 10400                                   | A | 5210                                | 220   | 585  | EILVRSLRQDPLRSRRGKRHTGRRW<br>DGSGWRATGARE*RRESRGWEME<br>AREAGRRKPASERRKGSGRRAGDF<br>LEPATRSRSEKEVRTLARNGRP*AS<br>PGSHRSSQ*LQPRVACGGRAATKSS   |
| 4904  | 10401                                   | A | 5211                                | 1   | 291  | SFLETLLPRLGCSDAIMAHCSLELLG<br>YMRSCHLSLPS*DYRPTPSRLANSFF<br>LIHGGFFTLSWADLQLLGLKQSFRK<br>SWGLTGVSHHAQPFFPYYLY  |
| 4905  | 10402                                   | A | 5212                                | 228   | 379  |  |
| 4906  | 10403                                   | A | 5213                                | 317   | 534  | ATKEN*INWDLIK*NKQKPFASKDT<br>TKQAKRQHIEWEKKVVNPIYDKAP<br>VSRIKNLLKLNNKNTNNLIVKKK   |
| 4907  | 10404                                   | A | 5214                                | 3   | 366  | IGY/NPDTVACV/PILGWNGDNMLE QSANMPWFKGWKVTRKDGNASGT TLLEALDCILPPTRPTDKPLRLPLQD VYKIGGIGTVPVGRVETGVLKPGM VVTFAPVNVTTEVKSVEMHHEAQK AK  |
| 4908  | 10405                                   | A | 5215                                | 1   | 1254   |  |
| 4909  | 10406                                   | A | 5216                                | 33  | 1472   | KLPLKAKMGKEKTHINIVVIGHVDS GKSTTTGHLIYKCGGIDKRTIEKFEK EAAEMGKGSFKYAWVLDKLKAER ERGITIDISLWKFETSKYYVTIIDAPG HRDFIKNMITGTSQAD\CAVLIVAA GFVEFE\AGI\SKNGQTREHALLAYT LGVKQLIVGVNKMDSTEPPYS\QKR YEEIVKEGSTYIKKIGYY\PDTLAFEP ISGWNGDDMLEPSANMPWFKGWK VTRKDGNASG\TTLLEALDCILPPTR PTDKALRLPLQDVYKIGGIGTVP\VG \RVETGVLKPG\MGVTF\AP\VNVYN GK*KSVEMHHE/AL*SEALSWGTNV GLQLSRNVSVKDV\RRGNFAGDSK\ NDPPMEA\AGFT\AQVIILNHP\SQKN ARHMPLELDCHTAHIACKFAELKE KIDRRSGKKLEDGPKFLKSGDAAIV DIVSG\KPMCVESFSDYPPLGRFAVR DMRQTVAVGVIKAVDKKAAGAGK |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
| 4910  | 10407                                   | A | 5217                                | 178   | 566  | VTKSAQKAQKAK  KGGATCPESPQDRKRRGNLDMEKL YSENEGMASNHGKMENE*QPQDQR KPQVTLYSGRQEVRKRGKDRKQGQ NRR*GNV*RIKGKPESEGEAKEGKS EREGESEMEGGSEREGKPEIEGKPE SEGEPLE  |
| 4911  | 10408                                   | A | 5218                                | 27  | 336  | TNPVQQTLVPIWTSTRLPDTHEDKA<br>FSAPQIEDRGTPGLGSRGPALGPSPT<br>PDCAG*VVAAGPGPAESHPRAPKPT<br>AGMSPGVARLSSPGSGSQGSWQNQ<br>ERP   |
| 4912  | 10409                                   | A | 5219                                | 2   | 454  | HFNMRDPLTDCPYNKVYKNLKEFS QNGENFCKQVTSVLQQRANLEISY AKGLQKLASKLSKALQNTRKSCVS SAWAWASEGMKSTADLHQKLGKA IELEAIKPTYQVLNVQEKKRKSLDN EVEKTANLVISNWNQQIKAKKLM VSTQET*STADLHQKLGKAIELEAIK PTYQVLNVQEKKRKSLDNEVEKTA NLVISNWNQQIKAKKLLMVSTQET   |
| 4913  | 10410                                   | A | 5220                                | 26  | 130  | TTWKYQYKNLERNQKEITELKSTIA EIENITRGI*R*FEQTKE*INELEDKI MEIFKDKR*KKGEKSLRGLWPPSRD KEACMPWKLQTEEKKKGAERLSEE IMAESFSNLLADMNINS*ELKSTIAEI ENITRGI  |
| 4914  | 10411                                   | A | 5221                                | 48  | 394  | SPSMCGSLDPPTLPQTWLQVPSMLT<br>HPCPPPPHCPPLAHPPSSLLPSTHIY<br>H**HLSPPYPNPGTQEGHSGVRLRA<br>TDVASPSVLGQFPSYSISVPREGHA<br>ATVAAKGPLECRA  |
| 4915  | 10412                                   | A | 5222,                               | 3   | 726  | EQEVDYDPKEFNAETFTFHADICTL SEKERQIKKQTALVELVKHKPKAT KEQLKAVMDDFAAFVEKCCKADD EMPADLPSLAADFVESKDVCKNYA EAKDVFLGMFLYEYARRHPDYSVV LLLRLAKTYETTLEKCCAAADPHEC YAKVFDEFKPLVEEPQNLIKQNCEL FEQLGEYKFQNALLVRYTKKVPQV STPTLVEVSRNLRKVGSKCCKHPEA KRMPCAEDYLS\VVLNQLCVLH/EK TPVSDRVTKCCTESLVNRRPCFSAL EVDETYVPKEFNAETFTFHADICTL SEKERQIKKQTALVELVKHKPKAT KEQLKAVMDDFAAFVEKCCKADD EMPADLPSLAADFVESKDVCKNYA EAKDVFLGMFLYEYARRHPDYSVV LLLRLAKTYETTLEKCCAAADPHEC YAKVFDEFKPLVEEPQNLIKQNCEL FEQLGEYKFQNALLVRYTKKVPQV STPTLVEVSRNLRKVGSKCCKHPEA KRMPCAEDYLSRGPEPVMCVA |
| 4916  | 10413                                   | A | 5223                                | 4274  | 5256   | HTLFGDKLCTVATLRETYGEMADC CAKQEPERNECFLQHKDDNPNLPR LVRPEVDVMCTAFHDNGETFLKK* VIRCL*FKIKKHGVTP*ANTL*KLP* QKYFQH*DLEVLL**FFKEVVFDTT   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------|--|--|
|   |   |   |                                     |             |  | KFYTAKNMIKDILKFIETGYNLSQK<br>FKIDKFFNVFRRYVYMVVIIDFVLV<br>SNIILPKFNHLCTHTHTHTHLTLFST<br>YLKNDRDKTIMCKLSLIG*L\ESLEF<br>GGSGENVDYNYFCNIVCYRK/ADCF<br>SFLKFRYLYEIARRHPYFYAPELLFF<br>AKRYKAAFTECCQAADKAACLLPK<br>VLCTRIEKKSLLSNLILSILWLDLGT<br>LSV   |
| 4917  | 10414                                   | A | 5224                                | 1           | 332  | RMPCAEDYLSVVLTQLCVLHDKTP<br>VSDIVAKCCSESLVNSQACLSDL*V<br>KDAYVPKEFNTETFTFHADICALSE<br>TERRIMKQTGLDEFVKHKP*ASDER<br>LSAVMDDFAAF   |
| 4918  | 10415                                   | A | 5225                                | 7           | 564  | TTRAAGREALSPGQGAGGGEGGAE PRHTATGHAAGREGRGGGGAGGEGGAE GWPRGARALHDQAEGRGGLPAGLP VQAERPQREPCSGQVGSEPPCHP\A TAGGRKVRPAWPAAAGEAGGHSG TGRAGAAGGAAVGTGGGAAGPGG LPMSGGAGPGGSGAAPHAAS*VQ PAAGAASAATRNRIMPKTT  |
| 4919  | 10416                                   | A | 5226                                | 132         | 917  | PGLFYLGEEQPGPQPAGGPAAGQG ATAGAEEAAGCPGGAAAPAVLAG GRAGGRSAGWCAGAPGA*PGLFYL GEEQPGPQPAGGPAAGQGATAGAE EAAGCPGGAAAPAVLAGGRAGGRS AGWCAGAPGA*AQP*TTGAAGREA LSPGQGAGGGEGGAEPRHTATGHA AGREGRGGRGADQG*SLSQATDLW TSGPSHKWTDLSLWPYPCCSGCSW GQCL*LRAEGRGGLPAGLPVQAERP QREPCSGQVGSEPPCHPVSHTPKGP VPHCLGASPGLLWLATAGGRKVRP AGPAAAGEAGGHSGTGRAGAAGG AAVGTGGCQQRWIR  |
| 4920  | 10417                                   | A | 5227                                | 3           | 1245   | AWEFVWHPGGFDRSCPGPQGGEGS EGGEGT*EGSGSLALRPRPLSCPRA GPGPGPRLA*ASVYPWNQKRVGGL WRPQRTPARLCDPHAPEHAWAL*G KPGPAGHPAEAA*RQRE*AAGPRGT AAAPAGQDRQHHAGPRGRPARGA AAAERQRAPEKGEEQPGPQPAGGP AAGQGAAAGAEEAAGCPGGAAAP AVLAGGRAGGRSAGWCAGAPGA* AQP*TTGAAGREALSPGQGAGGE GGAEPRHTATGHAAGREGRGGRG ADQG*SLSQTTDLWTSGPSHKWTD LSLWPYPCCSGCSWGQCL*LRAEG RGGLPAGLPVQAERPQREPCSGQV GSEPPCHPVSHTPKGPVPHCLGASP GLLWLATAGGRKVRPAGPAAAGE AGGHSGTGRAGAAGGAAVGTGGG AAGPGGLPM |
| 4921  | 10418                                   | A | 5228                                | 612         | 795  | PGFISAIGGLVGLSSYDFYEYKEYED<br>KPTSPPIAEMNPGYNI*HDLIKSFKM<br>LAFICSISS  |
| 4922  | 10419                                   | A | 5229                                | 1           | 345  | SSWSFTLVTQAGVQWHDLGSLQPL   |

| SEQ ID<br>NO: of        | SEQ ID<br>NO: of    |   | SEQ ID NO: | Nucleotide<br>location of              | Nucleotide<br>location of last                         | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible   |
|-------------------------|---------------------|---|------------|--|--|---|
| nucleo-tide<br>sequence | peptide<br>sequence | d | 09/770,160 | first codon<br>for peptide<br>sequence | codon for last<br>amino acid of<br>peptide<br>sequence | nucleotide insertion)   |
|                         |                     |   |            |  |  | PSEFKRFSCLSLPSSWDCRRLPPRPA<br>NFLYF**RWGFTILTSLVLSY*PCVS<br>PTSASQSAGITGVSDHARLIVGDFN<br>TPLLITERSSTQKI   |
| 4923                    | 10420               | A | 5230       | 1                                      | 1212   | MPKKRQALVEFEDVLGACNAVNY AADNQIYIAGHPAFVNYSTSQKISRP GDSDDSRSVNSVLLFTILNPIYSITTP TRLNVFKNDQDTWDYTNPNLSGQG DPGSNPNKRQRQPPLLGDHPAEYG GPHGGYHSHYHDEGYGPPPPHYEG RRMGPPVGEYGPHADSPVIMVYGL DQSKMNCDRVFNVFCLYGNVEKV KISLKKQSPGGRPMGEEWL\DGYAV DRAITHLNNNFMFGQKLNV/CVGA QAREGSRGTGERKGGEWGPAEEHS EAEVLTHTEMGCGSVSKQPAIMPG QSYGLEDGSCSYKDFSESRNNRFST PEQAAKNRIQHPSNVLHFFNAPLEV TEENFFEICDELGVKRPSSVKVFSGK SERSSSGLLEWESKSDALETLGFLN HYQMKNPSINLVT  |
| 4924                    | 10421               | A | 5231       | 1                                      | 421  | FDPPGCFFTPIGNPFGPFQGNFHFRK NGVQAMVEFDSVQSRQAAKASLN GADIYSGCCTLKIEYAKPTRLNVFK NDQDTWDYTNPNLSGQGDPGSNPN KRQRGTVISQD*PSLLKNYCTCDFF FSCSYICAAHVLCGTFQ   |
| 4925                    | 10422               | A | 5232       | 2                                      | 1883   | DEQRRRSGAMVKMAAAGGGGGGGGRYYGGGSEGGRAPKRLKTDNAGDHGGGGGGGGGGAGAAGGGGGGGENYDDPHKTPASPVVHIRGLIDGVVEADLVEALQEFGPISYVVVMPKKRQALVEFEDVLGACNAVNYAADNQIYIAGHPA\FVNYSTSQKISRIDE*NDYR\SVNSVLLFTIVNTINWITTDVLYTMCNPCGPVQRIVIFRKNGVQAMVVFDSVQSAQRAKASLNGGDIYSGCCTLKIGYAKPTRLNVFKNDQDTWDYTNP\NLSGQGDPGSN\PNKRQRQPPLLGDHPAEYGGPHGGYHSHYHDEGYGPPHYEGRRMGPPVGGHRQCPSRYGPQYGHPPPPPPPPEYGPHADSPVLMVYGLDQSKMNGDRVFNVFCLYG\NVE\KVKFMKSKPGAAMVEMADGYAVDRAITHLNNNFMFGQKLNVCVSKQPAIMPGQSYGLEDGSCSYKDFSESRNNRFSTPEQAAKNRIQHPSNVLHFFNAPLEVTEENFFEICDELGVKRPSSVKVFSGKSERSSSGLLEWESKSDALETLGFLNHYQMKNP\NGPYPTLKLCFSPAQHAFLIRCLGRVPFEQENISLSFMPFFGFCFCYLQKILGSPFFFFFFFFFLKARVEEGFPPP |
| 4926                    | 10423               | A | 5233       | 2                                      | 337  | DMILAERGGVCVMMKTQCCTFIPN TSTTDGSITRALQGLTALSNELANN SGVNDPFTGWLEK*FSKWKGIIASIL TSLAAVMGVLILVRCCVIPCLQRLM QRLIKMALTQTS  |

| SEQ ID<br>NO: of        | SEQ ID<br>NO: of    |   | SEQ ID NO: | Nucleotide<br>location of              | Nucleotide<br>location of last                         | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible   |
|-------------------------|---------------------|---|------------|--|--|---|
| nucleo-tide<br>sequence | peptide<br>sequence | d | 09/770,160 | first codon<br>for peptide<br>sequence | codon for last<br>amino acid of<br>peptide<br>sequence | nucleotide insertion)   |
| 4927                    | 10424               | A | 5234       | 62                                     | 343  | RQLNRNDPNRNKGKKVGIKQCLRF<br>WNNFILTCLIGVSEIEEKKNGAE*IF<br>EEIMSKNFPKLIKYINPQIQEA**TPS<br>KINTEKTTFRH*IIKGR                                    |
| 4928                    | 10425               | A | 5235       | 1                                      | 359  | TDDDLNWLDHSRTFREQGVDETET<br>CLLRRKFSYSDQNVDSRDPVQLNLL<br>YVQARDDILNGSHPVSFEKACEFGG<br>FQAQIQFGPHVEHKHKPGFLE*MTF<br>CFSFFSFLLSSFSFSFLFLS       |
| 4929                    | 10426               | A | 5236       | 2                                      | 264  | SYYPRGEISVPFFNICHFFLSCFYNLS<br>RFFCKKSPASPLCFSIKKSPFVKIHL<br>VFSLVTSSFLK*FFFYL*FFPESVISF<br>GSFSNSD   |
| 4930                    | 10427               | A | 5237       | 3                                      | 246  | LIPRGQGSTVVLPYNPATSIFGNDLN<br>EIKMYGHAKTCIWMFMTSSFIIDRT<br>RKRQ*CSSVREWINKQ*CIQTMELV<br>FGRN  |
| 4931                    | 10428               | A | 5238       | 78                                     | 411  | VLNSPICNCLYPILCSFLFLIIYFVVC<br>FYTFIPVFYLVYHQEIVI*SLTLVFFV<br>CVVKINTRLMVHIFILYICL*LSICNS<br>VYLLHVHIYLEHFL*HILMVVFFKR<br>SDQSS               |
| 4932                    | 10429               | A | 5239       | 2                                      | 175  | TKLDFIGIKGFSSVKDNVKGMRRQA<br>TDWEKIFAKETSDKGLLSKIY*KPF<br>KLSKQPN   |
| 4933                    | 10430               | A | 5240       | 1                                      | 335  | VTIRGAGIPDESRNVNYSLASFLKR<br>WLTLMDRGFIFNLINDYISGFSPKDP<br>KVLAEYKFEFLQTICNHEHYIPLNLP<br>MAFAKPKLQRV*DSDLEYSLSDEY<br>CKHHFLGGLL               |
| 4934                    | 10431               | A | 5241       | 139                                    | 354  | SPCLPYCCLLCYRYGDGRIMIGFSC<br>GH*VVISTHTGELGQEIFQARNHKD<br>NLTSIAVSQTHIKVATCENNLP  |
| 4935                    | 10432               | A | 5242       | 2                                      | 332  | ILAGAII*DNEIKLM*IEKEVVKLFLF TDDMILCVENSKEHTHSHTQLLGLI NEFSRASG*KINVQKLFLYTNNVQS KNEIKEPSLCTKASKRIGYLGIHLTK EV*DLYSERTKPH*KKNRILRNTFN KRSVRLVQ |
| 4936                    | 10433               | A | 5243       | 137                                    | 290  | GSSDINQTKHVRS*VNRQICSRTTQ<br>QSPEDCDFKKDGLVKRCMGTQTRQ<br>SL   |
| 4937                    | 10434               | A | 5244       | 1                                      | 363  | LTCSGDKEQIKDKSHVLKGKGNFE<br>RETS*KKK*SLPPFDDNVEPNDLYV<br>EENICSKSDSERPRSASSSSRSSSSFT<br>PSQTRQQGPLKSMMNDLHSDDYEE<br>ESDEMEDNGPDFEMGKPVNIR     |
| 4938                    | 10435               | A | 5245       | 2                                      | 376  | VHLGWCMLPLRTHTEYVKALSYA* DKQLGA*AGLDRQIFLWDANTLSA LTASNNTVTTSSLSGNTDSIYRLAM NQLVTIIVSGSNDKALRVWDPLTCA TLVNLKGHTDNGKALVFNRDGTQC LSR            |
| 4939                    | 10436               | A | 5246       | 60                                     | 185  |   |
| 4940                    | 10437               | A | 5247       | 1                                      | 146  | RWRDLGSPQPAGFR*FCCLSLLSSW<br>DYRHAPLF*QFYLFILLFCKKYF  |
| 4941                    | 10438               | A | 5248       | 2                                      | 298  | TFFTPFPVAKPNPRGPKTPAPYFSPQ  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|---|
| 4042  | 10420                                   |     | 5240                                | 77  | 270  | GPQKIYPPKFLGPPFNFPPPLLGKVF<br>RAPNPRV*LPPGARPSSSSSLLPGF*<br>KIPKPLFY*KKIFPTPQKTKK   |
| 4942  | 10439                                   | A   | 5249                                | 77  | 370  | EYS*SVVFLDLMRRQEELRRMEELH<br>NQE  |
| 4943  | 10440                                   | A   | 5250                                | 83  | 467  | YSEKSAGLWLNMLEKSLPGHRDTA<br>TQIQHVSPMCQVEPPAKKAATLAE<br>GDKDNDI*PCFVQRQLREGRQGRA<br>ARLWEKWLRWYVEKKAKKTALV<br>VKSSIPLDIKPWDNETNIAQLEACM<br>RFIQLDGLV                        |
| 4944  | 10441                                   | A   | 5251                                | 1   | 359  | KYTLSRLATVPPTLNPAEYNISPDTR<br>RAQVEQLAIRAGLK*EYLLQYNNP<br>NRRGLIEDPALIRWTYARSANVYPN<br>FRPTPKNSLLGALCAFGPLFFWYCV<br>FKTDMDRNQKLIREGKLDQ                                     |
| 4945  | 10442                                   | A   | 5252                                | 3   | 349  | SSLATVPANLNPAEYSISPDNRRAQ<br>VEQLAIRAGLK**YLLQYNNPTRIGI<br>IKDPALIRWTYARSANVYPNFRPIPK<br>NSLLGDLCAYGPLFFWYCVFKPDM<br>DRKETLIPEGKLDQ   |
| 4946  | 10443                                   | A   | 5254                                | 1   | 415  | NAVIQVAHPLVQKQ*VDYIHNGFL<br>VPVMGPALHKTSVEEMIASTAYLEL<br>FLRSISEPALLRTLLRFLLLHRHDTH<br>TILDTLVARIGSNSRLCMVSLSLFKT<br>LLNLSCEDVLLQLGLRYLVPCNHV<br>MLSQKPAVRDVDL              |
| 4947  | 10444                                   | A   | 5255                                | 34  | 394  | YRHYTICCIIGFLNTITMMTVSFHKY<br>GEYFPGT*DLRDIDAGKC*YYAVNF<br>PMRDGIDDESYGHIFKPIISKVMEM<br>YQPIAVVLQCDAYSLYGDSLDCFNL<br>TIIRHSTRLYLI*SYHFTS                                    |
| 4948  | 10445                                   | A   | 5256                                | 178   | 417  | ILVPPAGGKGPNLI*WNPGPPGARG<br>FPGLTPPRGGKKGRAQPPPENLVF*<br>EKTGFPIVQRGGLKPPPGPPKGGE*R<br>GGPP  |
| 4949  | 10446                                   | A   | 5257                                | 749   | 1049   | DGSSLLGPRPGGKGPNQTKGNPRPP<br>G*RESPPHPPPRRGKKRMAQPPQLI<br>WDFSSSSGFPL*QGGGINPHPDPPKG<br>GKKRGEPPEPTTGPSKRGKKQGFG  |
| 4950  | 10447                                   | A   | 5258                                | 1   | 359  | LFPKVNLSPVTPAKDTGLTAAPQEP<br>KAPKASPVQHALPSSLSVPHTAILV<br>TGAQLCGPAVNLSQIKDTACKSLLG<br>LEEKKHAEAPAAENPHGGPGDSSA<br>PY**GDAPKGHAIRAVEVPD                                     |
| 4951  | 10448                                   | A   | 5259                                | 1   | 441  | FFFLNRVLTLITQAGVQWCDHGSLQ<br>PRSLGLK*PSHFSLPSS*DYRCAPPH<br>LANFYIFYKDRWGFTMLPRLVWEL<br>LGSSDLSILDSQSAGITGVRHHTWA<br>NFFNFLCVSGIN*RNFYNKFTSWGS<br>HPNSQYYSGISWGQSTNILLGY     |
| 4952  | 10449                                   | A   | 5260                                | 1   | 553  | FYFYFFFPLFFFFKPQDDFLVPGDQ<br>NQRPGGSMPLGTAFILFQMKTLSLV<br>RRGINQDN*HWRQEDPLIPISPGFPS<br>RIPPLKSEMSLPLSTDGSETRRTQSP<br>FDEIYMAHDASGLRLPDSPPPPAAP<br>GRDPAPSGQRAPGKLRGQCQLKSE |

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|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | RESRKEERQRSKPGEAAALGGVAC<br>TFHLKSRS  |
| 4953  | 10450                                   | A | 5261                                | 1486  | 1695   | GKSCRPVNIYFILFSSFLRRSFALVA<br>QAGVQWCDLGSLQPPPPGFK*FSCL<br>SLPSSWDYRYPPLCPANFC  |
| 4954  | 10451                                   | A | 5262                                | 1   | 334  | RRFVSQETGNLYIAKVE*SDVGNYT<br>CVVTNTVTNHKVLGPPTPLILRNDG<br>VMGEYEPKIEVQFPETVPTAKGATV<br>KLECFALGNPVPTIIWRRADGKPIA<br>RKARRHEGCEM   |
| 4955  | 10452                                   | A | 5263                                | 78  | 313  | KVTYIQKNVYSKCTAGWVFTQRAR<br>VGSREPFPAAPSPGPHGGDPPSPPQL<br>G*PLSPLPQPAPVRLPSPVMMSERIL<br>PF  |
| 4956  | 10453                                   | A | 5264                                | 3   | 320  | IFSQENL*YSDGSDILGLLALQAEEN<br>LGMVMIFTLVTAVQEKLNEIVDQIK<br>TSSSSSSSSSSSSAEEAEKQLFHGTP<br>VTIENVLNWESQGWRRQTFLGKILE<br>KEKG  |
| 4957  | 10454                                   | A | 5265                                | 3   | 941  | APPRCLGDLWARARATMTDYGEE QRNELEALESIYPDSFT\VDCTLIQPS *QLVFQNINGLS*YHILLQ*CFT*QG PC*VLSENPP\SFTITVTSEAG\ENDES IHIKLLSCVLAVQTTLKFTYSEKYPD EAPLYEIFLPGKILEDN\DVSDILKLL \ALQAEENLGMVMIFTLVTAVHERI NV\LVDHIITRCEVEMKL*DKEAEE AVKQLFHGTPVTIENFLNWKA/RSF DAELLEIKKKRMKEEEHAGLDKK\S GKQLFETDHNLDTSDIQFLEDAGNN V\EVDESLFQEMDDLELEDDEDDPD YNPADPESDSAD |
| 4958  | 10455                                   | A | 5266                                | 1   | 332  | LKKHKSTRVP*NVKSGK*NFSPPFKI<br>RPWAQKRAKKKGAREKKAD*EKG<br>EFGKLSSSSRFRPGKKV*G*PKGFQR<br>NFEKKPVKSQGPVNMGVIPAFEKKP<br>RIPPVAKIPI  |
| 4959  | 10456                                   | A | 5267                                | 3   | 375  | SASPQTLQQSLPRSIAPKPLTVRLPM<br>NQIVTSVTIAANMPSNIGAPLISSMG<br>TTMDGSAPSTQVSPSVQTQQHQMQ<br>LSSSSSSSSSQMQQMQQQQLQQHQ<br>MHQQIQQQMQQQHFQHHMQ*HLQ<br>Q  |
| 4960  | 10457                                   | A | 5268                                | 1   | 360  | KGAPKHGQAPLGDPPRAVGGQEH* GPARGRGPGPREPGSGQTSSPWVH VRPGGGKNDSGKARP*ILDPKSVSC IPAPSSHRPLSSPTPNPFP*SSYEGSP RSPQPWTLQPQGPWPPSRQA  |
| 4961  | 10458                                   | A | 5269                                | 1   | 181  | KKKPQTWEKLV*GLF*KKRNPGWG<br>QRVPPVTPPLWGVKKRGGVFFRGL<br>KPPLKPRENPFF  |
| 4962  | 10459                                   | A | 5270                                | 10  | 108  | SHINVPMNQP*VVSLGPGQVTKGW<br>DQGLLVMCE   |
| 4963  | 10460                                   | A | 5271                                | 1   | 336  | EFLGAVGFCRLWIPNFAVLAKPLYG<br>VTK*GDTELFKWGSQQQ*AFHELK<br>EKLMSAPALGLPDLTKPFTLYVSER<br>EKMAIGVLIQMVGPWPRPVAYLSK  |

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|---|---|---|-------------------------------------|---|--|---|
| 4964  | 10461                                   | A | 5272                                | 1   | 118  | ELDGVSKARSEGCE TEVRHGKLDSSKWIPIRGN*NIYNP HCLSYKLEHGSDQEIPSDWYPFATV QFSVPDLC   |
| 4965  | 10462                                   | A | 5274                                | 2   | 327  | SCLVLVLLCVEYLFPYLHFQSICVFT<br>GEVSFLQAAYSWVMGFFVFLFILIH<br>SYFL*LLWGLFISLHLWLSLTCEDLF<br>LLFFSRCLIYIICFVFLLFMSFLILWR<br>LLVF                                    |
| 4966  | 10463                                   | A | 5275                                | 171   | 331  | LKTSFRTKTCT*MLTASLFVIAKTW<br>KQPRCPSVGE*LSNL*YVQTMECYS<br>VLK   |
| 4967  | 10464                                   | В | 5276                                | 83  | 332  | MGKRÖNRVAYMNPIAMARSRGPIQ<br>SSGPTIQDYLNRPRPTWEEVKEQLE<br>KKKKGSKALAEFEEKMNENWKKE<br>LEKHREKLLSGX*   |
| 4968  | 10465                                   | A | 5277                                | 76  | 138  |   |
| 4969  | 10466                                   | A | 5278                                | 1   | 1050   |   |
| 4970  | 10467                                   | С | 5279                                | 146   | 433  | MKKKSNERWDQVYKILKGKSLRPG<br>FPRCATVRAIQHHGEAGQSGGLYEP<br>NSNGEIKGSNPVFRANNTGLSESTK<br>AYLGRSKRATRKEKERLQGFG*  |
| 4971  | 10468                                   | A | 5280                                | 27  | 264  | NPNHQSLLCRAFCGVLILILPVLALL<br>TRLSFGELTLYNNHFIYIFKAFFKFI*<br>VFKWTGDNMFFIKGDMDSLAFGGG   |
| 4972  | 10469                                   | A | 5281                                | 135   | 358  | VHSPVL*LISTIPTSRLKFLKETGHGT<br>PMEEIPEEELSEDVEQIDHADRELRR<br>GQNLRCKGIHRLPTHIQVGQN  |
| 4973  | 10470                                   | A | 5282                                | 15  | 196  | KGKIVKLDFIKI*NFFSAKDPVNY*K<br>DNYRLRKMTANHISDKEFVSKTYK<br>ECLKLNLKKF  |
| 4974  | 10471                                   | A | 5283                                | 307   | 383  | YF*VSLATLCVYFLLDEGNILTATK<br>VFTSMSLFNILRIPLFELPTVISAVVQ<br>TKISLGR   |
| 4975  | 10472                                   | A | 5284                                | 3   | 267  | TIVRPYLLKKKTGTIVEERVNAPGW<br>NEDDDVSVSDESELPTSTTLKAFEK<br>STMEQLVEKACFRDYHRLGL*TLSG<br>SCCRS*P*SRRVQ  |
| 4976  | 10473                                   | A | 5285                                | 1   | 260  | TAVPSAASMTSTRAASASSVHVPVS<br>ALGAGSAATAASEEMQTIPQATAA<br>KYPRTIHPESSTSASRSLGT/TISSHP<br>VSHKCSFHKSG   |
| 4977  | 10474                                   | A | 5286                                | 60  | 292  | VTNFLIFHMRIISKYISIFLTVFFFVSQ<br>IVLLFKHSYFSYLELWKMQK\RDSK<br>NAT*KRAL*RFHEKSFHEGCMCIKS  |
| 4978  | 10475                                   | A | 5287                                | 738   | 1152   | KGRVWSWCSRKRTFCSFGSFSSSDA<br>LTSYITTAAIPT\TAVGGASATAVPS<br>AASMTSTRAASASSVHVPVSALGA<br>GSAATAASEEMSDKELITCTRQLKR<br>DGCFGQYTNQPGTGNMGKKQPRIT<br>LCPLNKRKVVAVKPN |
| 4979  | 10476                                   | A | 5288                                | 3   | 555  | RKRTFCSFGSFSSSDALTSYITHCCQ<br>SPPAAV*LASATAVPSAASMTSTRA<br>ASASSVHVPVSALGAGSAATAASEE<br>MYVPRVVTSAQQKAGRTITARITGR<br>CDFASKNRISSSLAIMGVSPPHELSC                 |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | CGKTSSQSTVQTHSLKQLPAKYPRT<br>HSIPESSTLSLPRSLGTQISSHPVSHK<br>CSFP   |
| 4980  | 10477                                   | A | 5289                                | 94  | 323  | VIGYRNIRCTILTSTITSSLSIL*LNH* PETRLSE*AGV*DKGLVVAQMMWL MDHIFKYTNFGIVSLVHGDFFIRQ   |
| 4981  | 10478                                   | A | 5290                                | 2   | 319  | MVLVTLDDKYAVAALWGKVKVDE<br>VDGEALGRLMVVYPWTQRFWES*<br>GDLSPPDADMGNPKVKVHGNKVL<br>GAVSNGQAHVDNLKGTFATVSEM<br>HCDKLHVAQEPEVL   |
| 4982  | 10479                                   | A | 5291                                | 1   | 159  | RDLQHFPSSVAM*DQTQNDIASTSN<br>HESILQGIKGQSQL*EEVQLME*APV<br>DC  |
| 4983  | 10480                                   | A | 5292                                | 187   | 282  | LRSY*CLLLMISFTRNANLFRLHGT<br>HTDTFKCLEYEKCFNCNSDLIVHHR<br>INMDHNPHQTSA*DSGLLLGMHF  |
| 4984  | 10481                                   | A | 5293                                | 1   | 156  | SGGVDEQMMREKEELMLWLQDYE<br>EKIKKAEREL*EQIKREMKKNQKRK<br>REKK   |
| 4985  | 10482                                   | A | 5294                                | 179   | 322  | NKVGGLTLPNCKTYYKATIIKTVW<br>YWRKKRQIGQ*NRIESPEIDPHKY   |
| 4986  | 10483                                   | A | 5295                                | 2   | 395  | RDRESDRDGQRRERERRTRKWSRS<br>RSHYRSPSRCRTKSKSSSFGRIDRDS<br>YSPR*KGRWANDGWRCPRGNDRY<br>RKNDPEKQNENARKEKNDIHLDAD<br>DPNSADKHRNDCPNWITEPINCGPD<br>PRTRNPEKL                  |
| 4987  | 10484                                   | A | 5296                                | 3   | 228  | HELPHPGLGLKRGCWVLEVAEHVV<br>LGKALLILLPYRFKRNILAMDDKTG<br>MTRNPHFSHNNWIPTFFSTQYFWIIF<br>KVRWPRLKDTTDLRILAPNCLADR<br>LSRHRCNIWQFMQGIRPLVLNFGSC<br>T*PSFQPQQLYTNLFQHPVFLDHL |
| 4988  | 10485                                   | A | 5297                                | 61  | 360  | YVSNSKCSNHRK*SLSSSSSSERESS<br>FVPQVELHGRDLG*LQLWLPGFGK<br>FPGLTPLRNGDDGPRPQPPANLGLL<br>VKTGFSPVAHLGVNLGTLGDCPAL<br>P   |
| 4989  | 10486                                   | A | 5298                                | 124   | 351  | EREFRFVPQVELHDRDLGSLHPGTP<br>GLRKFSGLTLPRSGDNGPGPPPPVN<br>LGFLEETGFSHVAHFGLNFGT*GDC<br>P   |
| 4990  | 10487                                   | A | 5300                                | 3   | 388  | HERHERHEGALSQDALLRISIPLDSN<br>MRPEKCRRFVHPQRQLLHLNGTFP<br>NTSDADMEPCVDGWVHDIISFSSTI<br>VTE*DLVCDSQSLTSVAKCAFMTG*<br>TADGFLGAHLSHRVRASSNVCMGG<br>SIVC                     |
| 4991  | 10488                                   | С | 5301                                | 47  | 269  | MPPLIQSGMSSRTKTRTSSPCWNVH<br>PAPEQYEAPDKDFMIVALDCSAAW<br>PRAWVVTWSSWCPQQHHDIAVPV<br>HA*  |
| 4992  | 10489                                   | A | 5302                                | 1   | 253  | MYTQ/HPEQYEAPDKDFMIVAL/DL<br>LSGLAEGLGGHVEQL/VARSNIMTL<br>LFQCM/QAEFMPILGTNLNPEF/ISVC<br>NNATWAIGEICMQW  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   | 1 |                                     | Sequence                | sequence   |   |
| 4993  | 10490                                   | A | 5304                                | 229                     | 2984   | PCPCQNFLRCSTSFNFSLPCAMDWQ PDEQGLQQVLQLLKDSQSPNTATH RIVRDKLKQLNQFPDFNNYLIFVLT RLKSEDEPTRSLSGLILKNNVKAHY QSFPPPVADFIKQECLNNIGDASSLI RATIGILITTIASKGELQMWPELLPQ LCNLLNSEDYNTCEGAFGALQKICE DSSELLDSDALNRPLNIMIPKFLQFF KHCSPKIRSHAIGCVNQFIMDRAQA LMDNIDTFIEHLFALAVDDDPEVRK NVCRALVMLLEVRIDRLIPHMHSIIQ YMLQRTQDHDENVALEACEFWLTL AEQPICKEVLASHLVQLIPILVNGM KYSEIDIILLKGDVEEDEAVPDSEQD IKPRFHKSRTVTLPHEAERPDGSED AEDDDDDDALSDWNLRKCSAAAL DVLANVFREELLPHLLPLLKGLLFH PEWVVKESGILVLGAIAEGCMQGM VPYLPELIPHLIQCLSDKKALVRSIA CWTLSRYAHWVVSQPPDMHLKPL MTELLKRILDGNKKVQEAACIAFAT LEEKACTELVPYLSYILDTLVFAFG KYQHKNLLILYDAIGTLADSVGHHL NQPEYIQKLMPPLIQKWNELKDED KDLFPLLECLSSVATALQSGFLPYC EPVYQCCVTLVQK\TLAQAMMYTQ HPEQYEAPDKDFMIVALDLFSGLAE GLGGHVEQLVARSNIMTLLFQCMQ DSMPEVRQSSFAFLGDFTKACSSHV KPCIAEFMPILGTNLNPEFISVCNNA TWAIGEICMQMGAEMQPYVQMVL NNLVEIINRPNTPKTLLENTGRLTSP SAIPAITIGRLGYVCPQEVAPMLQQF IRPWCTSLRNIQDNEEKDSAFRGIC MMIGVNPGGVVQDFILFCDAVASW VSPKDDLRDMFYKILHGFKDQVGE DNWQQFSEQFPPLLKERLAAFYGV |
| 4994  | 10491<br>10492                          | A | 5305<br>5306                        | 20                      | 411<br>1020  | LSLTSRMEEAELVKGRLQAITDKRK   |
|   |   |   |                                     |                         |  | IQEEISQKR\RKLGEDKPKA\QPLKT<br>KAL\REKW\LPRWNPASGKEQEEM<br>KKQNQQDPAPRSQVPRTKYPSGLR<br>KRSQDLEKAELQISTKEEAILKKLKS<br>IERTTEDIIRSVKVEREERAEESIEDI<br>YANIPDLPKSYIPSRLRKEINEEKED<br>DEQNRKALYAMEIKVEKDLKTGES<br>TVLSSIPLPSDYFNVTGIKVYDEGQK<br>SVYAVSSNHSAAYNGTDGLAPVEV<br>EELLRQALERNSKSPTEYHEPVYAN<br>PFYRPTTPQRETVTPGPNFQERITIK<br>TNGLGIGVNESIHNMGNGLSEERGN<br>NFNHISPI   |
| 4996  | 10493                                   | A | 5307                                | 1                       | 95   | GTRTFLRTYLSEIARRHPEFYAPELL  |
| 4997  | 10494                                   | A | 5308                                | 1                       | 338  | *FAKR GTSLSA*GLNIDGQLGLGHTEDIPY YTPCRSLFG*PIQQVACGWHVTIML TEHGQALLCGCNSIVQLAGPHGHL RRVGT*TIELRRENAVHIGAALMPH  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|------------------------------------|--|
| 4998  | 10495                                   | A | 5309                                | 3                       | 472                                | VALITISKSIFQCK  VTEFAKTCVADESAENCDKSLHTLF GDKLCTVATLRETYGEMADCCAK QEPERNECFLQHKDDNPNLPRLVRP EVDVMCTAFHDNEETFLKKYLYEI ARRHPYFYAPELLFFAK/RLDELRD EGKASSAKQRLKCASLQKFGERAF KA\VARLSQRFP   |
| 4999  | 10496                                   | A | 5310                                | 12835                   | 13995                              | TIPIESDIFPSIFYLYLSSLAYADTYE ALSRFY*KKKLINLLLSLN*ATHFPK IMPVVQVELKAKFN*LFR\KCFLPST NPLLCRWR*YDEWNIATS*LIPAKC SLFYLLC*TVSCLAENT*LLFFRLLV RYTKKVPQVSTPTLVEVSRNLGKVS SKCCKHPEAKRMPCAEDYVSL*KHI IN***KNFPFRYC*CYLS*AEGSNVC VCMFCACVCACTCVYV*YWQSRPR G**FFFFF*DGVSLCCPGWSAVVPSR LTATSASQVQAILLPQPPK*LGLQV HATMPG*FFVFLVENFQLHLF*ISAL LPVL*LSVVLNQLCVLHEKTPVSDR VTKCCTESLVNRRPCFSALEVDETY VPKEFNAETFTFHADICTLSEKERQI KKQT                   |
| 5000  | 10497                                   | A | 5311                                | 1                       | 349                                | GTSKKLANKVVYNVGLCICLFDITK<br>LEDAYVFPGDGASHTKVHFRCVEC<br>HPFLHEILTGKIKGCSPEGAHHPLR*<br>HPDFPLFSRPPAFLSPSQYILSPREIL<br>VHPSILKFRTRRPY   |
| 5001  | 10498                                   | A | 5312                                | 1                       | 410                                | IEHGIVTNWDDMEKIWHTFYNEL<br>RVAPEEHPVLLTEAPLNPKANREK<br>MT/QGSVPLPAFPP*SLQIMFETFNTP<br>AMYVAIQAVLSLYASGRTTGIVMD<br>SGDGVTHTVPIYEGYALPHAILRMD<br>LAGRDLTDYLMKIL  |
| 5002  | 10499                                   | A | 5313                                | 216                     | 390                                | GSADARAPPVLSPVIFCPS*FLTGRP<br>LQGVMVGMGQKDSYVGDEAQSKR<br>GILTLKYPIEHGIVTNWDDMEKIWH<br>HTFYNELRVAPEEHPVLLTEAPLNP<br>KANREKMTQVRLGRRPCSSRPFPSH<br>FLPILISDGSSPAGRHGGHGPEGLLR<br>GRRGPEQAWHPDPEVPH  |
| 5003  | 10500                                   | A | 5314                                | 4                       | 1254                               | HAHAKLGTRAASSRTLFFRQLRRR VSLPVAMEEEIAALVIDNGSGMCK AGFAGGDA\PRA\VFPSIVGRPRHQG VMVG\MGQK\DSYVGDEAQSKRGI LTLKYPIEHGIVTN\WDDMEKIWHH TFYN\ELRV\APEE\HPVL\LTEAPLEP QGQTREKMTQ\IMFETFNTP\AMYR GPSRAVLSL*\ASGR\TTGHCHGTLG DGVTHTVPIYGGLPHCSTPFLRLGP GLARDLTDYLMKILT*SEGYSFTTH GPSGKFVRDI\KEKLCYVALDF\EQE MATAASSSSLEKSYELPDGQVITIG NERFRCPEALFQPSFLGMESCGIHET TFNSIMKCDVDIRKDLYANTVLSGG TTMYPGIADRMQKEITALAPSTMKI KIIAPPERKYSVWIGGSILASLSTFQ |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  QMWISKQEYDESGPSIVHRKCF  |
|---|---|---|-------------------------------------|---|--|--|
| 5004  | 10501                                   | A | 5315                                | 279   | 418  | VEHSISNKENFLGQGTGCHACNLNT<br>LGGRGGRITWRSGV*DQLDQH   |
| 5005  | 10502                                   | С | 5316                                | 274   | 530  | MPCAEDYLSVVLNQLCVLHEKTPV<br>SDRVTKCCTESLVNRRPCFSALEVD<br>ETYVPKEFNAETFTFHADICTLSEKE<br>XQIXKQTALV*   |
| 5006  | 10503                                   | A | 5317                                | 2   | 736  | RLAKTYETTLEKCCAAADPHECYA<br>KVFDEFKPLVEEPQNLIKQNCELFE<br>QLGEYKFQNALLVRYTKKVP/SVVL<br>LLRLAKTYETTLEKCCAAAHPHEC<br>YAKVFDEFKPLVEEPQNLIKQNCEL<br>FEQLGEYKFQNALLVRYTKKVPQV<br>STPTLVEVSRNLGKVGSKCCKHPEA<br>KRMPCAEDYLSVVLNQLCVLHEKT<br>PVSDRVTKCCTESLVNRRPCFSALE<br>VDETYVPKEFNAETFTFHADICTLS                       |
| 5007  | 10504                                   | В | 5318                                | 120   | 1070   | MPADLPSLAADFVESKDVCKNYAE AKDVFLGMFLYEYARRHPDYSVVL LLRLAKTYETTLEKCCAAADPHEC YAKVFDEFKPLVEEPQNLIKQNFHT ECCHGDLLECADDRADLAKYICEN QDSISSKLKECCEKPLLEKSHCIAEV ENDEMPADLPSLAADFVESKDVCK NYAEAKDVFLGMFLYEYARRHPDY SVVLLLRLAKTYETTLEKCCAAADP HECYAKVFDEFKPLVEEPQNLIKQN CELFEQLGEYKFQNALLVRYTKKV PQVSTPTLVEVSRKPRKSGQOML* |
| 5008  | 10505                                   | A | 5319                                | 2   | 668  | 1 Q V S 11 1 L V E V S I R F R R S G Q Q I V L   |
| 5009  | 10506                                   | C | 5320                                | 246   | 365  | MDDFAAFXXXCCXXDXKGDLLXR<br>RKVKNLLLQVQLPLGF*   |
| 5010  | 10507                                   | С | 5321                                | 261   | 656  | MPCAEDYLSVVLNQLCVLHEKTPV<br>SDRVTKCCTESLVNRRPCFSALEVD<br>ETYVPKEFNAETFTFHADICTLSEKE<br>RQIKKQTALVELVKHKPKATKEQL<br>KAVXDDFXAFVEKCCKGDXKGELL<br>XRRXVXNLL*  |
| 5011  | 10508                                   | С | 5322                                | 158   | 607  | MLCQSVGSKCCKHPEAKRMPCAED YLSVVLNQLCVLHEKTPVSDRVTK CCTESLVNRRPCFSALEVDETYVPK EFNAETFTFHADICTLSEKERQIKKQ TALVELVKHKPKATKEQLKAVXDD FXAFVEKCCKGDXKGELLXRRXVX NLL*  |
| 5012  | 10509                                   | С | 5323                                | 158   | 532  | MLCQSVPCAEDYLSVVLNQLCVLH<br>EKTPVSDRVTKCCTESLVNRRPCFS<br>ALEVDETYVPKEFNAETFTFHADIC<br>TLSEKERQIKKQTALVELVKHKPKA<br>TKEQLKAVMDDFAAFVEKCCKAD<br>XKG*   |
| 5013  | 10510                                   | A | 5324                                | 2   | 740  | PADLPSLAADFVESKDVCKNYAEA KDVFLGMFLYEYARRHPDYSVVLL LRLAKTYETTLEKCCAAADPHECY AKVFDEFKPLVEEPQNLIKQNCELF EQLGEYKFQNALLVRYTKKVPQVS TPTLVEVSRNLGK/VCCTESLVNRR  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   | -                                   |   |  | PCFSALEVDETYVPKEFNAETFTFH<br>ADICTLSEKERQIKKQTALVELVKH<br>KPKATKEQLKAVMDDFAAFVEKCC<br>KADDKETCFAEEG*KLGAASQAAL<br>GLY  |
| 5014  | 10511                                   | A | 5325                                | 1   | 588  |  |
|   | 10512                                   | A | 5326                                | 364   | 1356   | TGDHAFQLWKSMKHTFQVSTPTLV EVSRNLGKVGSKCCKHPEAKRMPC AEDYLSVVLNQLCVLHEKTPVSDR VTKCCTESLVNRRPCFSALEVDETY VPKEFNAETFTFHADICTLSEKERQI KKQTALVELVKHKPKATKEQLKAV MDDFAAFVEKCCKADDEMPADLPS LAADFVESKDVCKNYAEAKDVFLG MFLYEYARRHPDYSVVLLLRLAKT YETTLEKCCAAADPHECYAKVFDE FKPLVEEPQNLIKQNCELFEQLGEY KFQNALLVRYTKKVPQVSTPTLVE VSRNLGKVGSKCCKHPEAKRMPCA EDYLSVVLNQLCVLHEKTPVSDRV TKCCTESLVNRRPCFSALEVDETYV PSVNSNSCRGLKKPRKSGQQML*TS *SKKNAL\SEDYLSVVLNQLCVLHE KTPVSDRVTKCCTESLV\KGDHAFQ LWKSMKHTFPKSL/YAETFTFHADI CTLSEKERQIKKQTALVELVKHKPK ATKEQLKAVMDDFAAFVEKCCKA DDEMPADLPSLAADFVESKDVCKN YAEAKDVFLGMFLYEYARRHPDYS VVLLLRLAKTYETTLEKCCAAADP HECYAKVFDEFKPLVEEPQNLIKQN CELFEQLGEYKFQNALLVRYTKKV PQVSTPTLVE/VLKKPRKSGQQML* TS*SKKNALCRRLSIPWS*TSYVCC MRKRQ*VTESPISRNLGKVGSKCCK HPEAKRMPCAEDYLSVVLNQLCVL HEKTPVSDRVTKCCTESLVNRRPCF SALEVDETYVPKEFNAETFTFHADI CTLSEKERQIKKQTALVELVKHKPK ATKEQLKAVMDDFAAFVEKCCKA DDEMPADLPSLAADFVESKDVCKN YAEAKDVFLGMFLYEYARRHPDYS VVLLLRLAKTYETTLEKCCAAADP HECYAKVFDEFKPLVEEPQNLIKQN CELFEQLGEYKFQNALLVRYTKKV PQVSTPTLVE/VPKEFNAETFTFHADI CTLSEKERQIKKQTALVELVKHKPK ATKEQLKAVMDDFAAFVEKCCKA DDEMPADLPSLAADFVESKDVCKN YAEAKDVFLGMFLYEYARRHPDYS VVLLLRLAKTYETTLEKCCAAADP HECYAKVFDEFKPLVEEPQNLIKQN CELFEQLGEYKFQNALLVRYTKKV PQVSTPTLVEVSRNLGKVGSKCCK HPEAKRMPCAEDYLSRGPEPVMCV A |
| 5016  | 10513                                   | A | 5327                                | 1468  | 1946   | LHISWEGEPIDYSVVLLLRLAKTYE TTLEKCCAAADPHECYAKVFDEFK PLVEEPQNLIKQNCELFEQLGEYKF QNALLVRYTKKVPQVSTPTLVEVS RNLRKVGSKCCKHPEAKRMPCAED YLSVVLNQLCVLHEKRQ*VTESPNA AQNPW*TGDHAFQLWKSMKHTFP KSLMLKHSPSMQIYENQDSISSKLK ECCEKPLLEKSHCIAEVENDEMPAD LPSLAADFVESKDVCKNYAEAKDV  |

| SEQ ID      | SEQ ID   | Me  | SEQ ID NO: | Nucleotide  | Nucleotide          | Amino acid sequence (X=Unknown; *=Stop                  |
|-------------|----------|-----|------------|-------------|---------------------|---|
| NO: of      | NO: of   |     | in USSN    | location of | location of last    | codon; /=possible nucleotide deletion; \=possible       |
| nucleo-tide | peptide  | đ   | 09/770,160 | first codon | codon for last      | nucleotide insertion)                                   |
| sequence    | sequence |     |            | for peptide | amino acid of       |   |
|             | J        |     | ļ          | sequence    | peptide<br>sequence | ]   |
|             |          | +-  |            |             | sequence            | FLGMFLYEYARRHPDYSVVLLLRL                                |
|             | i        | Ì   |            |             |                     | AKTYETTLEKCCAAADPHECYAKV                                |
|             |          |     |            |             |                     | FDEFKPLVEEPQNLIKQNCELFEQL                               |
|             |          |     |            |             |                     | GEYKFQNALLVRYTKKVPQVSTPT                                |
|             | İ        |     |            |             | 1                   | LVEVSRN/LRKSGQLR*I*TSCGRAS                              |
|             | 1        |     |            |             |                     | EFNQTKL*AF*AAWRVQIPECAISSL                              |
|             |          |     |            |             |                     | HQESTPSVNSNSCRGLKKPRKSGQH                               |
|             |          |     |            |             |                     | TKKVPQVSTPTLVEVSRNLGKVGS                                |
|             |          |     |            |             |                     | KCCKHPEAKRMPCAEDYLSVVLNQ                                |
|             |          |     |            | J           | }                   | LCVLHE\KTPVSDRVTKCCTESLGG                               |
|             | 1        | 1   |            |             |                     | TGRPCFSSSGKSMETYVP\KGFNA\E                              |
|             | }        | 1   |            |             |                     | TFTFPGSFCT/LSWEGEPIDYSVVLL                              |
|             |          |     |            |             |                     | LRLAKTYETTLEKCCAAADPHECY                                |
|             |          |     |            |             |                     |   |
|             | }        | 1   |            |             |                     | AKVFDEFKPLVEEPQNLIKQNCELF                               |
|             |          |     | 1          |             |                     | EQLGEYKFQNALLVRYTKKVPQVS                                |
|             |          |     | 1          |             |                     | TPTLVEVSRNLGKVGSKCCKHPEA                                |
|             |          |     | 1          |             |                     | KRMPCAEDYLSVVLNQLCVLHEKT                                |
| 5017        | 10514    | A   | 5328       | 1           | 2063                | PVSDRVTKCCTESLVNRRPVC                                   |
| 3017        | 10514    | ^   | 3328.      | ] 1         | ∠00 <i>3</i>        | MKKVKERDSFIMEDLGAEGLKSSA                                |
|             |          |     |            | [           |                     | YSRGVFRRDAHKSEVAHRFKDLGE                                |
|             |          | 1   | ł          | 1           |                     | ENFKALVLIAFAQYLQQCPFEDHVK                               |
|             |          | 1   |            |             |                     | LVNEVTEFAKTCVADESAENCDKS                                |
|             |          |     | <u> </u>   |             |                     | LHTLFGDKLCTVATLRETYGEMAD                                |
| '           |          | ł   | }          |             |                     | CCAKQEPERNECFLQHKDDNPNLP                                |
|             |          |     |            |             |                     | RLVRPEVDVMCTAFHDNEETFLKK<br>YLYEIARRHPYFYAPELLFFAKRYK   |
|             |          |     |            |             |                     |   |
| -30         |          |     |            | 1           |                     | AAFTECCQAADKAACLLPKLDELR<br>DEGKASSAKQRLKCASLQKFGERA    |
|             |          | 1   |            |             |                     |   |
|             |          | ]   |            | ]           |                     | FKAWAVARLSQRFPKAEFAEVSKL<br>VTDLTKVHTECCHGDLLECADDRA    |
|             |          |     |            |             |                     |   |
|             |          |     |            |             |                     | DLAKYICENQDSISSKLKECCEKPLL<br>EKSHCIAEVENDEMPADLPSLAADF |
|             |          |     |            |             |                     | VESKDVCKNYAEAKDVFLGMFLYE                                |
|             |          |     |            |             |                     | YARRHPDYSVVLLLRLAKTYETTLE                               |
|             |          | 1   |            |             |                     | ,   |
|             |          |     |            |             |                     | KCCAAADPHECYAKVFDEFKPLVE                                |
|             |          |     |            |             |                     | EPQNLIKQNCELF\EQLGKYKFQNA                               |
| -           |          |     |            |             |                     | AISSVTPKKVPQVSTQLLTPTLVEVS<br>K/NTLGKVGSKCCKHPESKKKCPVA |
| j           |          |     |            |             |                     | E\NYLS\VVLNQLC\LLHEKT\PVSDR                             |
|             |          |     |            |             |                     | VTKIAAQEPL\VNRRP\CFSALEVR*                              |
|             |          |     |            |             |                     | NIPFPKEVNA\ETF\TFHADICTLS\EK                            |
| }           |          |     |            | }           |                     | ERQI\RKQTALVELVETQAPRQQKE                               |
|             |          |     |            |             |                     |   |
|             |          |     |            |             |                     | QLKA/VLWDDFAAFVKKIAAKA\DD                               |
|             |          | 1 1 |            |             | 1                   | KETCFAEETISGNGAKKAIFLVNDE                               |
|             |          |     | İ          |             | 1                   | FILMSLTLIQNHRTYSSLPPCLYDSK                              |
|             |          |     |            | 1           | İ                   | KLLFHYLASIYPFVPPQDACKGVSE                               |
| 5018        | 10515    | A   | 5329       | 1           | 339                 | PDDDKANEKDADODKIADEKCHAN                                |
| 2010        | 10010    | ^   | 3369       | 1           | פככ                 | RRRKKNEKRKRQRKIKDEKSRKN                                 |
|             |          |     |            |             |                     | SLRVEMRETWRQREKQKEEDREKR                                |
|             |          |     |            | ĺ           |                     | KGQQEKERRKREIEEKEST*CEQME                               |
| 1           |          |     |            |             |                     | IGKTKKVNIHCRWQTQLKLKFHLFS                               |
| 5010        | 10516    |     | 5220       |             | 100                 | LFSIKMSLSSFSTRA   |
| 5019        | 10516    | A   | 5330       | 2           | 189                 | ARGGDAGDAFDGFGFGDDPSD*LS                                |
| ŀ           |          |     |            |             |                     | SCHIDVHRYLFSALCDCYTFYFVHI                               |
| 5020        | 10517    |     |            |             |                     | RVFLLSMRLADTA   |
| 5020        | 10517    | A   | 5331       | 3           | 346                 | HELETFP*CHNMPLLFYRDRLSASD                               |
| ł           |          |     | ł          |             | ł                   | MLQVRKVMDHVYESIITLNNESQST                               |
|             |          |     |            |             |                     | SSSNNEHPGGQERSLARA                                      |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----------|-------------------------------------|---|--|---|
| 5021  | 10518                                   | A        | 5332                                | 2   | 442  | VFMDADTLVLANIDDLFDREELSA<br>APDPGWPDCFNSGVFVYQPSVETY<br>NQLLHLASEQGGDQGILNTFFSSWA<br>TTDIRKHLPFIYNLSSISIYSYLPAI*S<br>EDVSGAISHLVPLGGDSQAMAQAV<br>LVFLGKEPGRGTEWGNKGPRA  |
| 5022  | 10519                                   | A        | 5333                                | 1   | 292  | VLANIDDLLTREEMSAAQTQGWPD<br>C/FNSGVFVYQPSVET/YNQLLHLAS<br>EQGSFDGGDQGILNTFFSSWATTDI<br>RKHLPFIYNLSSISIYSYLPVLPE   |
| 5023  | 10520                                   | A        | 5334                                | 81  | 1163   | VTNLRLPRPPAHFVITMTDQAFVTL TTNDAYAKGALVLGSSLKQHRTTR RLVVLATPQVSDSMRKVLETVFDE VIMVDVLDSGDSAHLTLMKRPELG VTLTKLHCWS\LTQYSKCVFMDAD TL\VLANIDD\LFDRE\ELSAAP\DPG G\PDCFNSG\VF\VYQPSV\ETYNQLL HLAS\EQGSFDGG\DQGILNTFF*QL GQQQDIRKHLAF\IYNLSNISIYSYLP AFKVFGASAKVVHFLG\RVKPWNY TY\DPKTKSVK\SEAHDPNMTHPEFL I\LWVGTSFTTNVLPLL\QQFGPWSK DT\CSYVN\VGRCLQGAISHLSLGE\I PA\MAQPF\VSSEERKERWEQGQAD YMGADSFDNIKRKLDTYLQ |
| 5024  | 10521                                   | A        | 5335                                | 1   | 241  | GTSNSEHALDDRSTAQCRVQMQVV<br>QQL*LQLAKDKERLQAMMTHLHV<br>KSTEPKAAPQPLNLVSSVTLSKSAL<br>EAYALELT  |
| 5025  | 10522                                   | A        | 5336                                | 13  | 229  | ACPRSPPPDPRLGCCFPPPPAVC*AP<br>AGPHPDGTTSLECTPAPHPSCEPVS<br>VQQKPEPSALYGTGFPFGLQS  |
| 5026  | 10523                                   | A        | 5337                                | 1   | 341  | GLGSGTSSSSVKSSISPKRVARWSFS<br>SRVCPVCPSSALSV*DSRSP*ASKSS<br>SNASGSPFCRVKKLLSCELQSKADS<br>FSSSSAVSRDRLSSSSSMLSRGQL*Q<br>ETSKEAQMPR   |
| 5027  | 10524                                   | A        | 5338                                | 3   | 168  |   |
| 5028  | 10525                                   | В        | 5339                                | 978   | 1502   | MSNLTLVCISTKHTPGISRAKEKKK GTSRLPTSLCQRRVGLTEEKSCSPEL QQKFRSETITEEELVGLMNKFVEDT KKGVHQKEGWPSSAYGVTKIGVTV LSRIHARKLSEQRKGDKILLNACCP GWVRTDMAGPKATKSPEEGAETPV YLALLPPDAEGPHGQFVSEKRVEQ W*  |
| 5029  | 10526                                   | A        | 5340                                | 3   | 239  | HEAKSSPNLVKAIILQIQEATQIPRRI<br>NKNKSTLRHIRIEFLKTKDKEKSLRT<br>PREIYYL*GNKISITVNLESESMGT  |
| 5030  | 10527                                   | A        | 5341                                | 3   | 322  | HEAKSSPNLVKAIILQIQEATQIPRRI<br>NKNKSTLRHIRIEFLKTKDKEKSLRT<br>PREIYYL*GNKISITVNLSSETMEAR<br>KKWHNYQMIIEKNCQPTILHPAKLS<br>FK  |
| 5031  | 10528                                   | A        | 5342                                | 4   | 351  | VGRGRQSHLSHSHPPTDPKGQQASP<br>GWNPGVRMLPGLKWLPQPPAASLS<br>*VPSSPTQQTSAGHLLSMSHEALTW  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | VDRATGLAGNGEACVSGTQRHPGL<br>SLAPPGCAPSPSSRAARA   |
| 5032  | 10529                                   | A | 5343                                | 3   | 163  | HEEQPEGLSPNLDRFLGDRHCNQFS<br>SRD*PIFLARCSHEYSGRHPRLADSI<br>LL  |
| 5033  | 10530                                   | A | 5344                                | 112   | 362  | EREQRETGLNDVHYLPIMYIVVGCA<br>IFIT*V*RGWSSPTKCRSTDTYCVNP<br>STRLHAYMAPRHKLHSHCAERDPD<br>QFTLLRHC  |
| 5034  | 10531                                   | В | 5345                                | 85  | 206  | XFSDPEVKKETRPALGSTVLLAPFL<br>HEHEPPSAEVLPGSWRX*  |
| 5035  | 10532                                   | A | 5346                                | 142   | 653  | GFWHQRILGASDQAHLLLPHKQDG<br>SADGARRVLACARGQGDLRLLRLH<br>LAAVPLQLPGGLRRRAVHVHGGGC<br>QQDGGAESWS/PSPSSPRGPRTLHR<br>VEKV\PGAPVTPLPVAFSCNPDHGIE<br>DPAFP*PAAGPR*LQEGPCGGSRAS<br>RAPTPTSTRSCCTECLRNSLILIC |
| 5036  | 10533                                   | A | 5347                                | 261   | 538  | GSRSRLLFSPRGPRTYPAWKRSTGA<br>PVTPSPIAFSCNPDHGIEDPAFP*PAA<br>GPR*LQEGPCGGSRASRAPTPTSTRS<br>CCTKCLRNFLILIC   |
| 5037  | 10534                                   | A | 5348                                | 7   | 264  | FQKISALPQRSDYTHNTPHTDPARV<br>SYKHAGANHTHIHTPMTNVSTTIYP<br>PHAYLHTHTQKTPPHIYSTHAP*I*L<br>FISTYAHTKN   |
| 5038  | 10535                                   | A | 5349                                | 208   | 713  | SVKMVRYSLDPENPTKSCKSRGS\N<br>LRVHFKNTRETAQAIKGMHI\RKAT\<br>KYLKDVTLQKQCVPFRRYNGGI\GR<br>CAQAKHWGWTQGR\WP*RVLNSL<br>VIEHIQVNKAPKMRRRTYRAHGRIN<br>PYMSSPCHIEMILTEKEQIVPKPEEE<br>VAQKKKISQKKLKKQKLMARE  |
| 5039  | 10536                                   | С | 5350                                | 286   | 591  | MVRLFNLNPEKRQRKSWQIRGFQS<br>SCFTLGTLVKLAQAIKGMHIRKATE<br>VSERWSLYRNSVYHSDGNNGGVG<br>RRAQAKQWGLGHKVGGPKKECLN<br>FLLHML*   |
| 5040  | 10537                                   | A | 5351                                | 1   | 305  | GTSIYNVLYEVPLPPPGRSLKFSGVY<br>GPIICQRPSTNELPLFDFPVKEVFELL<br>GVDNVYQLFTWALLQKYILLYVQR<br>*CNVTKALELSNLLLFHICDIKLV  |
| 5041  | 10538                                   | A | 5352                                | 15  | 234  | LSCPDQVHPHSLVPYPEPRRATASV<br>PETSGPPFPHPRRPYATTPPALGHNP<br>HA*LSSSFAGSRYKLGEMLHI   |
| 5042  | 10539                                   | A | 5353                                | 3   | 257  | HEVKYKNPAQ*QWHRLGPDAHVPE<br>EFRYHKQLIQSQLFLHYHLSQTFTL<br>QESADLQNAFLNSGQCILNKPLKFA<br>DLHSDFMKTI   |
| 5043  | 10540                                   | A | 5354                                | 3   | 334  | IIKFIWNPKRA*IAEAILSKKNIAGGI<br>TLPDFRLYNKAIVI*TAWYWHKNR<br>HIDQWNRILNPEIKSHTYSQRIFDKI<br>DKNIH*GKDTLFNKWCWERWIAIC<br>RRIKLDSLV   |
| 5044  | 10541                                   | A | 5355                                | 1   | 119  | QKSRW*TPPNSYMKVNVPEKSRNG<br>ETSLRTKIAVCQYYM  |
| 5045  | 10542                                   | A | 5356                                | 3   | 349  | HEPANADFAFRFYYLIASETPGKNIF   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | FSPPRFPAAYAMLSLGACSHSRSQIL<br>EGLGFNLTELSESDARRRCRQ*VGT<br>LDLTGHGLQTRGGQGPWPRARPSR<br>GGDAAAGSARLPPR  |
| 5046  | 10543                                   | Α | 5357                                | 1   | 499  |  |
| 5047  | 10544                                   | В | 5358                                | 66  | 641  | MASKINTKALQSPKRPRSPGSNSKV PEIEVTVEGPNNNNPQTSAVRTPTQ TNGSNVPFKPRGREFSFEAWNAKIT DLKQKVENLFNEKCGEALGLKQAV KVPFALFESFPEDFYVEGLPEGVPFR RPSTFGIPRLEKILRNKAKIKFIIKKP EMFETAIKESTSSKSPPRKINSSPNV NTTASGVEDLNIIQ* |
| 5048  | 10545                                   | A | 5359                                | 2   | 306  | ARGVCGGCRCLGFCGSVVGDLMY* NSFDCFKKVLRY*GFFGLYWGLIP* LIWFAPEQAIYLTDNVFVRDKFT*R DGSDSLSAEVLAGGCALGSLVIVTN SL  |
| 5049  | 10546                                   | A | 5360                                | 3   | 120  | HEGKEPDIPLYETVQTVGPSHARTY TVASHSEGR*TIC  |
| 5050  | 10547                                   | A | 5361                                | 2   | 366  | SLPASDRPPISSPLATSGTIFSAISCF<br>WDLPAPFLWLAPSCQPTMSSQIRQN<br>YSTDVEAAVNSLVNLYLQASYTYL<br>S\LQDIKKPAEDEWGKTPDAMKAA<br>MALEKKLNQALLDLHALGSART   |
| 5051  | 10548                                   | A | 5362                                | 1   | 108  |  |
| 5052  | 10549                                   | A | 5363                                | 2   | 536  | ARAARDWKNYSTDVEAAVNSLVN LYLQASYTYLSLGFYFDRDDVALE GVSHFFRELAEEKREGYERLLKMQ NQRGGRA\LFQDIKKPAEDEWGKTP DAMK\AAMALEKKLNQALLDLHAL GSARTDPHL\CDFLEPHFIDEEVKLI KKMGDHLSNLHRAGWPRRLGLGE YLFERLTLKHD              |
| 5053  | 10550                                   | A | 5364                                | 3   | 331  | HEQYPGSISISLTDLGCPDMPVIIAR* TAAADESLVPTRLMLQLADYGPVI YSLVI*VCLTAAFTLAQQHSKMEIY ADIIGSEDTTNEDYRSIALYFEREMR YLQAAKF  |
| 5054  | 10551                                   | A | 5365                                | 3   | 52   | HEQSWKAENEAFTLADLKQLPELN PPVLMPRGNVGTPLRVFLELIRACR LPPRIITQLHFQIPKIGYSLRYCNVPF EYEDSDTAVQE*LT  |
| 5055  | 10552                                   | A | 5366                                | 3   | 323  | STFFFFFLRQSLALVAQAGLRT\QW<br>RNLGSLQAPPPGFTPFSCLSLPSSWD<br>YRRPPPRLA\NFFFFFFFVFLAETGFH<br>CVLARMVSIS*PRDQPASASQSAGIT<br>GVSD   |
| 5056  | 10553                                   | A | 5367                                | 3   | 337  | HERHEDTLTLKERNRGNKGILDDID DHNIIIYHLPDA*SEEYEYFKEQTTL LRASIPFSVGGSNQLIEAIGKMVRGR LYPWSDVKVENPQHNDFMKLITML ITHMHDLQDV  |
| 5057  | 10554                                   | A | 5368                                | 16  | 313  | SHSVTQAGVQCWHRLHAQLIFLYF<br>LVETGFHRVSQDGLYLLTS*SARLG<br>LPKCWDYRRDDHAWPVQFFFKCST<br>PRPQAILDFAFTSHELCLGSMRLLKS  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|----------|-------------------------------------|---|--|---|
| 5058  | 10555                                   | A        | 5369                                | 1665  | 1787   | FFVLLVETGFHRVSQDGLDLLTS*S<br>AHLGLPKCWDYRHEPP   |
| 5059  | 10556                                   | A        | 5370                                | 1431  | 1553   | FFVLLVETGFHRVSQDGLDLLTS*S<br>AHLGLPKCWDYRHEPP   |
| 5060  | 10557                                   | A        | 5371                                | 1740  | 1862   | FFVLLVETGFHRVSQDGLDLLTS*S<br>AHLGLPKCWDYRHEPP   |
| 5061  | 10558                                   | A        | 5372                                | 1173  | 1295   | FFVLLVETGFHRVSQDGLDLLTS*S<br>AHLGLPKCWDYRHEPP   |
| 5062  | 10559                                   | A        | 5373                                | 1027  | 1149   | FFVLLVETGFHRVSQDGLDLLTS*S<br>AHLGLPKCWDYRHEPP   |
| 5063  | 10560                                   | A        | 5374                                | 2250  | 2372   | FFVLLVETGFHRVSQDGLDLLTS*S<br>AHLGLPKCWDYRHEPP   |
| 5064  | 10561                                   | A        | 5375                                | 934   | 1092   | FFVFLVETGFHRVSQDGLDLLTS*S<br>ARLSLPKCWDYRREPPCPPRIYILTR<br>SR   |
| 5065  | 10562                                   | A        | 5376                                | 2588  | 2824   | VAGTIGACHHAQLIFVFLVETGFHH<br>VGQDGLDLLTS*STHLGLPKCWDS<br>RREPLRPASPVVFQRTSAPVMADLT<br>PTVS  |
| 5066  | 10563                                   | A        | 5377                                | 935   | 1138   | RRGFTMFHHVSQGGLDLLTS*SARL<br>GLPKCWDYRREPLCPAWKDY*CKL<br>QDEVISQQGLKVSVVLIH   |
| 5067  | 10564                                   | В        | 5378                                | 79  | 1551   | MSEVTKNSLEKILPQLKCHFTWNLF KEDSVSRDLEDRVCNQIEFLNTEFK ATMYNLLAYIKHLDGNNEAALECL RQAEELIQQEHADQAEIRSLVTWGN YAWVYYHLGRLSDAQIYVDKVKQ TCKKFSNPYSIEYSELDCEEGWTQL KCGRNERAKVCFEKALEEKPNNPE FSSGLAIAMYHLDNHPEKQFSTDVL KQAIELSPDNQYVKVLLGLKLQKM NKEAEGEQFVEEALEKSPCQTDVLR SAAKFYRRKGDLDKAIELFQRVLES TPNNGYLYHQIGCCYKAKVRQMQ NTGESEASGNKEMIEALKQYAMDY SNKALEKGLNPLNAYSDLAEFLETE CYQTPFNKEVPDAEKQQSHQRYCN LQKYNGKSEDTAVQHGLEGLSISK KSTDKEEIKDQPQNVSENLLPQNAP NYWYLQGLIHKQNGDLLQAAKCY EKELGRLLRDAPSGIGSIFLSASELE DGSEEMGQGAVSSSPRELLSNSEQL N* |
| 5068  | 10565                                   | A        | 5379                                | 925   | 1127   | FFVFLVETGFHRVSQDGLDLLTL*S THLGLPKCWDYRREPLRPATFSSYQ RNNPDLILNDTIMPNIK   |
| 5069  | 10566                                   | A        | 5380                                | 438   | 815  | TRPSFSFNPLTLFFFFLRRSLALSPRL ECSGAISAHCKLRLLGSSHSPTSASR VAGTTSARHHAWLMFFFVFLVETG FHLVSQDSLDLLTS*SAPLGLPKCW DYRHEPPRPAHLHFLNFFLFSYT   |
| 5070  | 10567                                   | A        | 5381                                | 7944  | 10115  | KQCNYGHNLKTCSNFFFFWRWSLA<br>PSPRLECNGAISAHCKLRPPGFTPFS<br>CLSLPSSWDYRRSPPRAANFFVFLV<br>ETGFHQVSQDGLDLLTL*SARLGLP<br>KCWDYRREPPCPESALIF  |
| 5071  | 10568                                   | A        | 5382                                | 1   | 211  | LKTSEKWRNRQDKSNKGSKKAEKR  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of | location of last codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------|---------------------------------|---|
|   |   |   |                                     |             |                                 | RATHADRNREAARIRRKTYTNERK<br>HYEHHRTAGKDQDERATEDSRE*S<br>RE  |
| 5072  | 10569                                   | A | 5383                                | 2           | 373                             | ARECHHLCKINYMDLVKEFMTLNA<br>SAPLRSSFSDTMIRLPALTYPLFPAL<br>ATCAGYSDKA*SSISYVLHNSALWR<br>ASGPTDHRDAPA*A*LESRRSTLRIC<br>ELRTLYSLIKSTASNFDPIKLFS  |
| 5073  | 10570                                   | A | 5384                                | 112         | 913                             | DFLSMPNRRGGVSLPPTPP*PPFSVT HTIFSVSFSFHWLKGSFLRRQFSYCF YGMVLVPFPSHPPLSLSAPSKCLRIP PLPWGWVTAPRLRSHPSVTGRAVL ERKPSVRG*AGSLNTQARDTPPQLP ERPPEG*ALFPPFPYSMAPPSQLKPT LKITAVRS*ASGGATGLGGWSPLGL P*EQGLRPTATLTQTSGIALNPRSLT PAPQLRLSCPPHFALTTRAVPGGPQ PLAWGPEPGTPPAQPRPSPDSAQSH TVYRRESILFFIL |
| 5074  | 10571                                   | A | 5385                                | 2           | 345                             | SFWLLCGSSCSDLRSCQVLKCTRNI<br>PYSLVPTASCEHLHGPCIYRPCSVQS<br>VLTCTAAQATNILSAQSLLSGPTTQ*<br>WGLTYPCLLVGAADLTPPTTPPPPT<br>PAPPHLPSTPPP  |
| 5075  | 10572                                   | В | 5386                                | 36          | 340                             | MFLDEYARRHPDYSVVLLLRLAKT YETTLEKCCAAADPHECYAKVFDE FKPLVEEPQNLIKQNCELFEQLGEY KFQNALLVRYTKKNALCRRLSIRGP EPVI*   |
| 5076  | 10573                                   | A | 5387                                | 3           | 182                             |   |
| 5077  | 10574                                   | С | 5388                                | 602         | 877                             | METTLRRKCCARLQILHGMAMPKV<br>FRWNFKPLVGRSLRNLNPNKIVEAF<br>WSQLGRSYKFPGMRYLVSFTPKES<br>YPKCSNFPTLCRRVFKET*  |
| 5078  | 10575                                   | A | 5389                                | 1           | 404                             | GTRNDKMEPGLEQGTIPRLDSVTSS ECFASSGFHEDRSLSDVEEQEDSDG FYKEPITMEDLISYSFQVAIGMESLS SRLCIHRDLEARNFHLSGNYCDTSL EF*IENYDIYL**FNIYSPTKLKPEDT RLLKET   |
| 5079  | 10576                                   | A | 5390                                | 110         | 424                             | LSLLQREREGHLNGSPSFMLKCSGF<br>YRLA*GVCV*VSFVL*Y*HILIYSML<br>TVLILCIYFFNMLISGIYTDYAYFYIC<br>YIYYYCYIF*FILLCFYTLMTIFFGLI   |
| 5080  | 10577                                   | A | 5391                                | 2           | 361                             | ARETVKRIQYPIPLEGRLGLKPLIES LI*DGLLELCMSPYTTPILLVK*SDW *Y*LVEDLQAINQTVQTTHPVVPNP YTILSKIPYDHQWFTEIDLKDAFWA CPLAEDS*DIFTFEWARA  |
| 5081  | 10578                                   | A | 5392                                | 3           | 335                             | QSQSWWRQKGVSRAGAGPIHPQGL<br>LFGFS*GDLGPLGTLGEQGLIGQRG<br>EPGLEGDSGPMGPDGLKGVRGDPG<br>PDGEHGEKGQEGLMGEDGPPGPPG<br>AAGVRGLHGKSGY  |
| 5082  | 10579                                   | A | 5393                                | 61          | 497                             |   |
| 5083  | 10580                                   | A | 5394                                | 16          | 951                             | RRPKIRDKFWGSV/KKLAHSEASPVI<br>SGASKRAKKQINVYVGKGSS/QGK  |

| SEQ ID                  | SEQ ID              | Me                                     | SEQ ID NO: | Nucleotide                 | Nucleotide                   | Amino acid sequence ( X=Unknown; *=Stop                   |
|-------------------------|---------------------|--|------------|----------------------------|------------------------------|---|
| NO: of                  | NO: of              |  | in USSN    | location of                | location of last             | codon; /=possible nucleotide deletion; \=possible         |
| nucleo-tide<br>sequence | peptide<br>sequence | d                                      | 09/770,160 | first codon<br>for peptide | codon for last amino acid of | nucleotide insertion)                                     |
| sequence                | sequence            |  | ļ          | sequence                   | peptide                      |   |
|                         |                     |  |            |                            | sequence                     |   |
|                         |                     | T                                      |            | 1                          |                              | MVVWVKKLDRDTVFALVNYIFFKG                                  |
|                         |                     |  |            |                            |                              | KWERPFEVKDTEEEDFHVDQATTV                                  |
|                         | ·                   |  |            |                            |                              | KVPMMKRLGMFNIQHCKKLSSWV                                   |
| 1                       | ł                   | ł                                      | 1          | 1                          | }                            | LLMKYLGNATAIFFLPDEGKLQHLE                                 |
|                         |                     | -                                      |            |                            |                              | N\ELTHD\IVTKFLE\NEDRRSASLHL                               |
| ĺ                       |                     | 1                                      |            |                            | 1                            | PKLSITGTYDLK\TVLGQ\LGITKVFS                               |
| İ                       |                     |  |            | 1                          |                              | NGAD\LSGVTEEAPLKLSKAVH*GC                                 |
|                         |                     |  |            |                            |                              | A*PSTEERGLKLAGGHVF*EGHYPC                                 |
| ĺ                       |                     |  | ĺ          |                            | ĺ                            | FIPPRGSSFNKPFVFLNGFEQN/SPSF                               |
| ]                       |                     | 1                                      | ]          | ]                          | ļ                            | PLFMGEKWVNPTPKITGLSLLNPSP                                 |
|                         |                     |  |            |                            |                              | PSLGPLPGMTLKKGLSWK  |
| .5084                   | 10581               | A                                      | 5395       | 2                          | 306                          | GFDHVAQAGLEPLGSSDLPPSASQS                                 |
|                         |                     |  |            | _                          | 300                          | AGITGMSHHTQPAYILKISFITLPFIIR                              |
| •                       |                     |  |            |                            |                              | SLS*VPFVFSIMYKSSFNFSPCGESVF                               |
| ļ                       |                     |  |            | 1                          |                              | STNLLNNEYLLIDWWLHFIIY                                     |
| 5085                    | 10582               | A                                      | 5396       | 1                          | 375                          | STILLINE I LLID W WLHFII Y                                |
| 5086                    | 10583               | A                                      | 5397       | 162                        | 426                          |   |
| 5087                    | 10584               | A                                      | 5398       | 140                        | 426                          |   |
| 5088                    | 10585               | $\frac{\Lambda}{A}$                    | 5399       | 158                        | 705                          | PSEKNKNNLLLGVVYVRHLPNLLD                                  |
|                         | 10000               | ```                                    | 3333       | 130                        | 705                          |   |
|                         |                     |  |            |                            | •                            | ETQIFSYFSQFG\PVTRFRLSR\NKRT<br>GN\SKGYAF\LEFESEDVCQNSCLKQ |
|                         |                     |  |            |                            |                              | WNNYLFGGKTLG/QCHFMPPEKVH                                  |
|                         |                     |  |            | 1                          |                              | K\NSFKDWDFPFKQPSYPSVKRV*S                                 |
|                         |                     |  | ,          | ]                          |                              |   |
|                         |                     |  |            |                            |                              | ESDTNTKA/DGMEERFKKKERLLRK                                 |
|                         | •                   |  |            |                            |                              | KLAKKGIDYDFPSLILQKTESISKTN                                |
| 5089                    | 10586               | A                                      | 5400       | 2                          | 388                          | RQTSTKGQVFT   |
| 5007                    | 10380               | '^\                                    | 3400       |                            | 388                          | FLFFFFEMESRSVAQAGVQWCDLG                                  |
| 1                       |                     | 1 1                                    | l i        |                            |                              | SLQPPPP\GLSDSPALASSVSWITDV                                |
|                         |                     |  |            |                            |                              | RHHLWLIFVFLVETGFRHVGQASLK                                 |
|                         |                     |  |            |                            |                              | LPTSGDLPTLASQSAGITGVSHYAW                                 |
|                         |                     | 1 1                                    |            |                            |                              | LIFVFLVETEFHHVGQAGLELLAPS                                 |
| 5090                    | 10587               | c                                      | 5401       | 197                        | 415                          | DPPA  |
| 5050                    | 10301               |  | 5-101      | 197                        | 413                          | MLLYVGLEPHHTHMLSLWPPRLMF                                  |
|                         |                     |  |            |                            |                              | PSVFFFFFFFFFLRQGLALLPRLECS                                |
| 5091                    | 10588               | -                                      | 5402       | 671                        | 006                          | GAILAHCNLHLLGSGDSLASAF*                                   |
| 3051                    | 10300               | A                                      | 3402       | 671                        | 986                          | KGVLFFFFKTES\HSVAQAGV\QW                                  |
| 1                       |                     |  | J          | j                          | j                            | CTLGSLQPP/PSRGSSDSPASASRVA                                |
|                         |                     |  |            |                            |                              | GIRGVHHHARLIFVFLVETGFHYVG                                 |
|                         | •                   |  |            |                            |                              | QAGLELPTSGDSPASASQSAGVTGV                                 |
| 5092                    | 10589               | $\frac{1}{\Lambda}$                    | 5403       | <u>(5</u>                  | 001                          | SHQCPA  |
| 5093                    | 10590               | $\begin{vmatrix} A \\ A \end{vmatrix}$ | 5404       | 65                         | 921                          |   |
| 5094                    | 10591               | -                                      | 5405       | 213                        | 442<br>1506                  |   |
| 5095                    | 10592               | A                                      | 5406       | 1                          | 286                          | DDI IVIDEDDEVEL VENI VAN OVED                             |
| 3033                    | 10372               | ^                                      | 3400       | 1                          | 280                          | DRLIYIPFPDEKSLVPILKANLGKSP\                               |
| 1                       |                     | 1 1                                    | ł          |                            | }                            | VPKDLDLEFLDLVPWGCGRLPRRG                                  |
|                         |                     |  |            |                            |                              | NQGCAHSLLHSPAGHACYSLTLDR                                  |
| 5096                    | 10593               | A                                      | 5407       | <del></del>                | 150                          | GFLLQKSKPKAVKLPRFSFG                                      |
| 5097                    | 10593               |  |            | 2                          | 158                          | N/  |
| 2077                    | 10074               | ^                                      | 5408       | 1                          | 9064                         | MLARAARGTGALLLRGSLLASGRA                                  |
|                         |                     |  | ĺ          |                            | ĺ                            | PRRASSGLPRNTVVLFVPQQEAWV                                  |
|                         |                     | 1 1                                    | ļ          |                            | <b>†</b>                     | VERMGRFHRILEPGLNILIPVLDRIR                                |
|                         |                     |  |            |                            |                              | YVQSLKEIVINVPEQSAVTLDNVTL                                 |
|                         |                     |  |            |                            |                              | QIDGVLYLRIMDPYKASYGVEDPEY                                 |
| J                       |                     |  | ļ          |                            | ļ                            | AVTQLAQTTMRSELGKLSLDKVFR                                  |
|                         |                     |  |            |                            |                              | ERESLNASIVDAINQAADCWGIRCL                                 |
|                         |                     |  | }          |                            |                              | RYEIKDIHVPPRVKESMQMQVEAE                                  |
|                         |                     | oxdot                                  |            |                            |                              | RRKRATVLESEGTRESAINVAEGKK                                 |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|---|---|---|-------------------------------------|-------------------------|---|---|
|   |   |   |                                     | sequence                | peptide<br>sequence   |   |
| <del></del>                                 |   |   |                                     |                         | Sequence  | QAQILASEAEKAEQINQAAGEASAV   |
|   |   |   |                                     |                         |   | LAKAKAKAEAIRILAAALTQHNGD  |
|   |   |   | }                                   |                         |   | AAASLTVAEQYVSAFSKLAKDSNTI<br>LLPSNPGDVTSMVAQAMGVYGALT   |
|   | }                                       |   |                                     |                         |   | KAPVPGTPDSLSSGSSRDVQGTDAS   |
|   |   |   |                                     |                         |   | LDEELDRVKMTWSPVPNFQLLNIPS   |
|   |   |   |                                     |                         |   | NWGQPHAPGQTSTEVPADGDGATD  |
|   |   |   |                                     |                         |   | GPLCLAHASLCCQVAGAAAAALPG  |
|   |   |   |                                     |                         |   | AIAGGAVGWARIPLRLRSLSTGMQ<br>KASVLLFLAWVCFLFYAGIALFTSG   |
|   |   |   |                                     |                         |   | FLLTRLELTNHSSCQEPPGPGSLPW   |
|   |   |   |                                     | <u> </u>                |   | GSQGKPGACWMASRFSRVVLVLID  |
|   |   |   |                                     |                         |   | ALRFDFAQPQHSHVPREPPVSLPFL   |
|   |   |   |                                     |                         |   | GKLSSLQRILEIQPHHARLYRSQVDP  |
| •   |   |   | ľ                                   |                         |   | PTTTMQRLKALTTGSLPTFIDAGSN   |
|   |   |   |                                     |                         |   | FASHAIVEDNLIKQLTSAGRRVVFM<br>GDDTWKDLFPGAFSKAFFFPSFNVR  |
|   |   |   |                                     |                         |   | DLDTVDNGILEHLYPTMDSGEWDV  |
|   |   |   |                                     |                         |   | LIAHFLGVDHCGHKHGPHHPEMAK  |
|   |   |   |                                     |                         |   | KLSQMDQVIQGLVERLENDTLLVV  |
|   | 1                                       |   |                                     |                         |   | AGDHGMTTNGDHGGDSELEVSAA   |
|   |   |   |                                     |                         |   | LFLYSPTAVFPSTPPEEPEVIPQVSLV<br>PTLALLLGLPIPFGNIGEVMAELFSG   |
|   |   |   |                                     | '                       |   | GEDSQPHSSALAQASALHLNAQQV  |
|   |   |   |                                     |                         |   | SRFLHTYSAATQDLQAKELHQLQN  |
|   |   |   |                                     |                         |   | LFSKASADYQWLLQSPKGAEATLP  |
|   |   |   |                                     |                         |   | TVIAELQQFLRGARAMCIESWARFS   |
|   |   |   |                                     |                         |   | LVRMAGGTALLAASCFICLLASQW<br>AISPGFPFCPLLLTPVAWGLVGAIAY  |
|   |   |   |                                     |                         |   | AGLLGTIELKLDLVLLGAVAAVSSF   |
|   |   |   |                                     |                         |   | LPFLWKAWAGWGSKRPLATLFPIP  |
|   |   |   |                                     |                         |   | GPVLLLLLFRLAVFFSDSFVVAEAR   |
|   |   |   |                                     |                         |   | ATPFLLGSFILLLVVQLHWEGQLLP   |
|   |   |   |                                     |                         |   | PKLLTMPRLGTSATTNPPRHNGAY<br>ALRLGIGLLLCTRLAGLFHRCPEETP  |
|   |   |   |                                     |                         |   | VCHSSPWLSPLASMVGGRAKNLW   |
|   |   |   |                                     |                         |   | YGACVAALVALLAAVRLWLRRYG   |
|   |   |   |                                     |                         |   | NLKSPEPPMLFVRWGLPLMALGTA  |
|   |   |   |                                     |                         |   | AYWALASGADEAPPRLRVLVSGAS<br>MVLPRAVAGLAASGLALLLWKPVT  |
|   |   |   |                                     | j                       |   | VLVKAGAGAPRTRTVLTPFSGPPTS   |
|   |   |   |                                     |                         |   | QADLDYVVPQIYRHMQEEFRGRLE  |
|   |   |   |                                     |                         |   | RTKSQGPLTVAAYQLGSVYSAAMV  |
|   |   | ļ |                                     |                         | ļ   | TALTLLAFPLLLLHAERISLVFLLLF  |
|   |   |   |                                     | ]                       |   | LQSFLLHLLAAGIPVTTPGKYLSSD   |
| }   |   |   |                                     | ]                       | }   | SLKDNSDSQGLRKRQQPPGNEADA<br>RVRPEEEEEPLMEMRLRDAPQHFY  |
|   |   |   |                                     |                         |   | AALLQLGLKYLFILGIQILACALAAS  |
|   |   |   |                                     |                         |   | ILRRHLMVWKVFAPKFIFEAVGFIV   |
|   |   |   |                                     | j                       |   | SSVGLLLGIALVMRVDGAVLLSSAS   |
|   |   |   |                                     |                         |   | TERHCQQTTRGRKPTLVSVLVLDSE<br>QRKDGRLRSALVSSYRFLETPSAGA  |
|   |   | } |                                     |                         |   | ELFRPASATMSRQTTSVGSSCLDLW   |
|   |   | - |                                     |                         |   | REKNDRLVRQAKVAQNSGLTLRRQ  |
|   |   | } |                                     |                         |   | QLAQDALEGLRGLLHSLQGLPAAV  |
|   | 1                                       | 1 |                                     |                         |   | PVLPLELTVTCNFIILRASLAQGFTE  |
|   |   |   |                                     |                         |   | DQAQDIQRSLERVLETQEQQGPRLE QGLRELWDSVLRASCLLPELLSALH   |
| 1   |   |   |                                     |                         | <u>.                                 </u>                         | AGPVER MD9 AFKY2CFFLEFF2WFH   |

| SEQ ID             | SEQ ID         |     | SEQ ID NO:            |                         | Nucleotide                         | Amino acid sequence (X=Unknown; *=Stop                                  |
|--------------------|----------------|-----|-----------------------|-------------------------|------------------------------------|---|
| NO: of nucleo-tide | NO: of peptide | tho | in USSN<br>09/770,160 | location of first codon | location of last<br>codon for last | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence           | sequence       | ľ   | 09///0,100            | L .                     | amino acid of                      | indefeorate insertion)  |
| •                  |                |     |                       | sequence                | peptide                            |   |
|                    |                | 1_  |                       |                         | sequence                           |   |
|                    | 1              |     |                       |                         | }                                  | RLVGLQAALWLSADRLGDLALLLE  |
|                    |                |     |                       |                         |                                    | TLNGSQSGASKDLLLLLKTWSPPAE   |
|                    | ļ              |     | 1                     |                         | ļ                                  | ELDAPLTLQDAQGLKDVLLTAFAY  |
|                    |                |     |                       |                         |                                    | RQGLQELITGNPDKALSSLHEAASG   |
| ł                  |                |     |                       |                         |                                    | LCPRPVLVQVYTALGSCHRKMGNP  |
|                    | İ              | ĺ   |                       | ĺ                       |                                    | QRALLYLVAALKEGSAWGPPLLEA  |
|                    |                |     |                       |                         |                                    | SRLYQQLGDTTAELESLELLVEALN   |
|                    |                |     |                       |                         |                                    | VPCSSKAPQFLIEVELLLPPPDLASP  |
|                    | }              |     |                       |                         | ļ                                  | LHCGTQSQTKHILASRCLQTGRAGD<br>AAEHYLDLLALLLDSSEPRVGPCMP                  |
|                    |                | ĺ   |                       |                         |                                    | EVFLEAAVALIQAGRAQDALTLCEE   |
| ĺ                  | 1              |     |                       |                         |                                    | LLSRTSSLLPKMSRLWEDARKGTKE   |
| l                  | 1              | 1   | ĺ                     |                         |                                    | LPYCPLWVSATHLLQGQAWVQLG   |
| I                  |                | 1   |                       |                         |                                    | AQKVAISEFSRCLELLFRATPEEKEQ  |
|                    |                |     |                       | }                       |                                    | GAAFNCEQGCKSDAALQQLRAAAL  |
|                    |                |     | ]                     |                         |                                    | ISRGLEWVASGQDTKALQDFLLSV  |
| į                  |                |     |                       |                         |                                    | QMCPVSAKRLRPSFESSLPLPLPLPL  |
| ł                  |                | -   |                       |                         |                                    | PPRGSGASVVRPTPRCRPRPARLAP   |
|                    |                | 1   | 1                     | 1                       | }                                  | LERTSGPGQVFRPTPPGRRPGALGR   |
|                    |                |     |                       |                         |                                    | QSAVRPTTRRKPLVPGESRPREPEA   |
|                    |                | 1   | į                     |                         |                                    | PAGPEEDIKVQRLGNLPKITIKQWH   |
|                    |                | 1   |                       |                         | <b>:</b>                           | NWNSDPMGLTIEFLLLTTLLSKGDD   |
|                    |                |     |                       |                         |                                    | LSTAILKQKNRPNRLIVDEAINEDNS  |
|                    |                | 1   |                       |                         |                                    | VVSLSQPKMDELQLFRGDTVLLKG  |
|                    |                |     |                       |                         |                                    | KKRREAVCIVLSDDTCSDEKIRMNR   |
|                    |                |     |                       |                         |                                    | VVRNNLRVRLGDVISIQPCPDVKYG   |
|                    |                |     |                       |                         |                                    | KRIHVLPIDDTVEGITGNLFEVYLKP  |
|                    |                |     |                       |                         |                                    | YFLEAYRPIRKGDIFLVRGGMRAVE   |
|                    |                |     |                       |                         |                                    | FKVVETDPSPYCIVAPDTVIHCEGEP  |
|                    |                |     |                       |                         |                                    | IKREDEEESLNEVGYDDIGGCRKQL   |
|                    |                |     |                       |                         |                                    | AQIKEMVELPLRHPALFKAIGVKPP   |
|                    |                | 1   |                       |                         |                                    | RGILLYGPPGTGKTLIARAVANETG   |
|                    |                |     |                       |                         |                                    | AFFFLINGPEIMSKLAGESESNLRKA  |
|                    |                |     |                       |                         |                                    | FEEAEKNAPAIIFIDELDAIAPKREKT   |
|                    |                |     |                       |                         |                                    | HGEVERRIVSQLLTLMDGLKQRAH  |
|                    |                |     |                       |                         |                                    | VIVMAATNRPNSIDPALRRFGRFDR   |
|                    |                |     |                       |                         |                                    | EVDIGIPDATGRLEILQIHTKNMKLA<br>DDVDLEQVANETHGHVGADLAAL                   |
|                    |                |     |                       |                         |                                    | CSEAALQAIRKKMDLIDLEDETIDA   |
|                    |                |     |                       |                         |                                    | EVMNSLAVTMDDFRVRTTPVPQW   |
|                    |                |     |                       |                         | 1                                  | ALSQSNPSALRETVVEVPQVTWEDI   |
|                    |                |     |                       |                         |                                    | GGLEDVKRELQELVQYPVEHPDKF  |
|                    |                |     |                       |                         |                                    | LKFGMTPSKGVLFYGPPGCGKTLL  |
|                    |                |     |                       |                         |                                    | AKAIANECQANFISIKGPELLTMWF   |
|                    |                |     |                       |                         |                                    | GESEANVREIFDKARQAAPCVLFFD   |
|                    |                |     |                       |                         |                                    | ELDSIAKARGGNIGDGGGAADRVIN   |
|                    |                |     |                       |                         |                                    | QILTEMDGMSTKKNVFIIGATNRPDI  |
|                    |                |     |                       |                         |                                    | IDPAILRPGRLDQLIYIPLPDEKSRVA   |
|                    |                |     |                       |                         |                                    | ILKANLRKSPVAKAGARSWADV\D  |
| ĺ                  |                |     | 1                     |                         |                                    | LGVPGLKMTNGFSGS*P*QEILPACF  |
|                    |                |     |                       |                         |                                    | AKLAI\RESNREVKIKAKNREEGKT   |
|                    |                |     |                       |                         |                                    | NPIKPMGRYE*WIDPVP\EIR\RDSLL   |
|                    |                |     | }                     |                         |                                    | KEAQSFCAPFLFSDNDIR\KY\EMFA  |
|                    |                |     |                       |                         |                                    | QTLSQ/ESRGFGSFRFPSGNQGGAGP  |
|                    |                |     |                       |                         |                                    | SQGSGGGTGGSVYTEDNDDDLYG   |
| 5098               | 10595          | A   | 5409                  | 96                      | 299                                |   |
| 5099               | 10596          | Α   | 5410                  | 174                     | 324                                |   |
| 5100               | 10597          |     | 5411                  |                         |                                    |   |

| SEQ ID      | SEQ ID   | Me  | SEQ ID NO: | Nucleotide                                       | Nucleotide            | Amino acid sequence ( X=Unknown; *=Stop           |
|-------------|----------|-----|------------|--|-----------------------|---|
| NO: of      | NO: of   | tho | in USSN    | location of                                      | location of last      | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide  | d   | 09/770,160 |  | codon for last        | nucleotide insertion)                             |
| sequence    | sequence |     |            | for peptide<br>sequence                          | amino acid of peptide |   |
| l           | 1        |     |            | sequence   | sequence              |   |
| 5101        | 10598    | A   | 5412       | 129  | 899                   | AAPGLGRGGGAAAGGGAVCPGTE                           |
| }           |          |     |            | 1  |                       | RPCAMAYAYLFKYIIIGRTTGVG*N                         |
| Į           |          | 1   | ŀ          |  |                       | PCPNALQFTD/KRGFQPSAMTLTIGV                        |
| }           | 1        | 1   | }          | 1  |                       | EFGA\RMITIDGKQIKL\QIWDTAGQ                        |
|             |          |     |            |  |                       | ESFRS\ITRSYYRGAAGALLVYDITR\                       |
| ł           |          | 1   | <u> </u>   | }  |                       | *DTFNH\LTTW\LEDARQHSNSNM\V                        |
|             |          |     | Ì          |  |                       | IMLIG\NKSD\LESRREVKKE/EKGEA                       |
|             |          | 1   | ļ          | l  |                       | FA\REHGLIFM\ETSAKTGFQCRKEG                        |
| ľ           |          |     | ĺ          |  | ĺ                     | ILFNTAKEILLKKFPRKGVFLTFN*W                        |
| Ì           |          |     |            |  |                       | RANGH/IKLGPQPAAYPIATHAGQS                         |
|             |          | ĺ   | [          |  |                       | G\GQQAGGGCC                                       |
| 5102        | 10599    | A   | 5413       | 1  | 408                   | MQLKRANPGPRRAPVRETVMLLLC                          |
|             |          | 1   | ļ          | ĺ  |                       | WGVPPGRPYKVDTESALLYQGPHN                          |
|             |          | 1   |            |  |                       | TLFGYSVVLHSHGANR\WGAPTAN                          |
| 1           | {        |     |            |  |                       | WLANASVINPGAIYRCRIGKNPGQT                         |
|             |          |     | ,          |  |                       | CEQLQLGSPNGEPCGKTCLEERDNQ                         |
| <u> </u>    |          |     | ]          |  | L                     | WLGVTLSRQPGENG                                    |
| 5103        | 10600    | C   | 5414       | 1  | 1026                  | MGLGIYLDQYTRQKGQDPVAELKQ                          |
|             |          | 1   |            |  | ĺ                     | LIPLVVSLSAPNLEMPLLKKKTTNPS                        |
| ŀ           |          |     |            |  |                       | TFLKSLSGGLNLFNFPFVETYTVEE                         |
|             |          | 1   | ĺ          |  | ĺ                     | VKVHPRNNTGGYNPEEEEDETASE                          |
|             |          | 1   | Ì          |  |                       | NCFPWNVDGDLMEVASEVHIRRVQ                          |
| ļ           |          |     |            | 1  |                       | KKEYVEENKIPRNPTYKGCEGPLQE                         |
|             |          | ļ.  |            |  |                       | NYKPLLNKIKEDTNKWKNIPCSWIG                         |
| 1           |          | 1   | 1          |  | ļ                     | RTDTVKMAILPKHDRVAEQRVVGA                          |
|             |          |     | ļ.         |  | 1                     | LVKQRASQCPRCRGGRSGPPGTAT                          |
| 1           |          | Ì   | Ì          |  |                       | ASPSPGRRPFGAVIAPRFPSHALSSW                        |
|             |          |     | ļ          |  |                       | YAGCNAEKSEVNAFPGTQGMRFIS                          |
|             |          | 1   | ì          | 1  |                       | AASYKDWVQVLQQKDVSRNMGTK                           |
|             |          |     |            |  |                       | ARMMPLGSSGGCHTIRTEVTQDSE                          |
|             | 10.501   |     | ļ <u>.</u> |  |                       | GQLAAVTTTGYTVVGLEPPKVSD*                          |
| 5104        | 10601    | A   | 5415       | 1  | 681                   |   |
| 5105        | 10602    | A   | 5416       | 1  | 779                   | MNNGRNYRCQNLVDKGVGENRGP                           |
|             |          | İ   |            |  |                       | ADNRMLVAHQCSREEKLKEPDEQV                          |
|             | Ì        |     |            | 1  | Ì                     | TPAVCQQDSLAMERLGRSPTAEEK                          |
| 1           |          |     | 1          |  |                       | VPETTTRFWAPGVEAPGDDAERRR                          |
|             | l        |     |            | 1  | ł                     | REASGPATRHSPLPTAGITAPKAGS                         |
|             |          |     | ĺ          |  | [                     | AKVQLSILKPSKLDKCSHKTSHTKS                         |
| 1           |          |     |            |  |                       | SYHYFLHYPVSSTVQPVAAAATPSY                         |
|             |          |     | 1          |  | [                     | ALIGSSLWPVNERGRQEESRTCIIDQ                        |
|             | ŧ        |     |            |  | i                     | SAWHVGRAEIRKLLPYCSTQGGLK                          |
|             |          |     | [          |  | [                     | YSDVTSGMVKDPPDVL/DRQKCLD                          |
| 5100        | 10000    | -   | 5410       | <del>                                     </del> | 1074                  | ALAALRHAKWSSEIRF                                  |
| 5106        | 10603    | A   | 5417       | 1  | 1274                  | MEMRRYEEDMYWRRMEEEQHHW                            |
|             |          |     |            |  | [                     | DDRRRMPDGGYPHGPPGPLGLLGV                          |
|             |          | 1   | 1          |  | [                     | RPGMPPQPQGPAPLRRPDSSDDRYV                         |
|             |          |     | 1          |  | 1                     | MTKHATIYPTEEELQAVQKIVSITER                        |
| 1           |          | Ì   | 1          |  | (                     | ALKLVSDSLSEHEKNKNKEGDDKK                          |
|             | 1        |     | 1          |  | 1                     | EGGKDRALKGVLRVGVFAKGLLLR                          |
|             |          | 1   | 1          |  | (                     | GDRNVNLVLLCSEKPSKTLLSRIAE                         |
|             | ]        |     | 1          |  | 1                     | NLPKQLAFISPEKYDIKCAVSEAAII                        |
|             |          |     | 1          |  | ĺ                     | LNSCVEPKMQVTITLTSPIIREENMR                        |
|             |          |     |            |  |                       | EGDVTSGMVKDPPDVLDRQKCLDA                          |
|             | -        | 1   | 1          |  | ł                     | LAALRHAKWFQARANGLQSCVIIIR                         |
|             |          |     | 1          | 1  | -                     | ILRDLCQRVP\TWS\DFPSWAMELLV                        |
|             | 1        | 1   | 1          |  | 1                     | EKAISSAS\SPQSPGDAL\RRVF\ECIS                      |
| l           | 1        | I   | 1          |  | 1                     | SGVILK\GSPG\LLDPCEKDPFDTLG                        |
| 1           | i .      | - 1 | 1          |  |                       | QQ*PD\QQR\EDITSSAQFA\LRLLAF\                      |

| 10604          | A                    | 5418                                 | 144   | 522   | RQIHKVLGMDPLPQMS\QRFN\IHNH QDR\RRDSDGVDGFEAEGKKDKKD YDNF  VDLLRAAGRQWQGPLRPRPSGRR* SARRA/LGKTTYCTDPAKFISVLWT YLATMLHVELPHMNLLSTMDLIEH YGKLAFNLDYYTEVLDLS*LLDHL AS/VPFLTAYRQVTEKLVQLIEDYIL RCFIHP MAVPGEAEEEATVYLVVSGIPSVLR   |
|----------------|----------------------|--------------------------------------|---|---|--|
| ,              |                      |                                      |   |   | SARRA/LGKTTYCTDPAKFISVLWT<br>YLATMLHVELPHMNLLSTMDLIEH<br>YGKLAFNLDYYTEVLDLS*LLDHL<br>AS/VPFLTAYRQVTEKLVQLIEDYIL<br>RCFIHP  |
| 10605          | A                    | 5419                                 | 1   | 2437  | MANDGEA EFEATIVI MACCIDEMI D   |
|                |                      |                                      |   |   | SAHLRSYFSQFREERGGGFLCFHYR HRPERAPPQAAPNSALIPTDPAAEG QLLSQTSATDVRPLSTRDSTPIQTRT CCCVISVRGLAQAQRLIRMYSGRR WLDSHGTWLPGRCLIRRLRLPTEAS GLGSFPFKTRKELQSWKAENEAFTL ADLKQLPELNPPVLMPRGNVGTPL RVFLELIRACRLPPRIITQLQLQFPKT GSSRRYGNVPFEYEDSETVEQEELV YTAEGEEIPQGTYLADIPASPCGEPE EEVGKEEEEESHSDEDDDRGEEWE RHEALHEDVTGQERTTEQLFEEEIE LKWEKGGSGLVFYTDAQFWQEEE GDFDEQTADDWDVDMSVYYDRDG GDKDARDSVQMRLEQRLRDGQED GSVIERQVGTFERHTKGIGRKVMER QGWAEGQGLGCRCSGVPEALDSDG QHPRCKRGLGYHGEKLQPFGQLKR PRRNGLGLISTIYDEPLPQDQTESLL RRQPPTSMKFRTDMAFAVIGPPGSG KTTYCLGMSEFLRALGRRVAVVNL DPANEGLPYECAVDVGELVGLGDV MDALRLGPNGGLLYCMEYLEANL DWLRAKLDPLRGHYFLFDCPGQVE LCTHHGALRSIFSQMAQWDLRLTA VHLVDSHYCTDPAKFISVLCTSLAT MLHVELPHINLLSKMDLIEHYGKLA FNL\DYYTEVLDLSYLL*PPGLLTLS SATTRPASIEEA/MCKLIEDY\NLVSF IPLNIQDKESIQRVLQAVDKANGYC FGAQEQRSLEAMMSAAMGADFHFS STLGIQEKYLAPSNQSVEQEAMQL |
| 10606          | A                    | 5420                                 | 2   | 78  |  |
| 10607          | A                    | 5421                                 | 94  | 253   |  |
| 10608          | A                    | 5422                                 | 2   | 318   |  |
|                |                      |                                      |   | _   |  |
|                |                      |                                      |   |   |  |
| 10611          | A                    |                                      |   | <u> </u>  |  |
| 10612          | A                    |                                      | 1   |   | ·  |
| 10613<br>10614 | A                    | 5428                                 | 3   | 392   | GGKIIVGDATEKDASKKSDSNP\LTE ILKCPTKVVLLRNMVGAGEVDEDL EVETKEECEK\YGKVGKCVI\FEIPG APDDEAVRIFLEFERVE\SAIKAVVD LNGRYFGGRVVKACFYNLDKFRVL DLAEQV  |
| 10<br>10<br>10 | 0612<br>0613<br>0614 | 0610 A<br>0611 A<br>0612 A<br>0613 A | 0610 A 5424<br>0611 A 5425<br>0612 A 5426<br>0613 A 5427<br>0614 A 5428 | 0610 A 5424 357<br>0611 A 5425 310<br>0612 A 5426 1<br>0613 A 5427 2<br>0614 A 5428 3 | 0610     A     5424     357     795       0611     A     5425     310     478       0612     A     5426     1     399       0613     A     5427     2     390       0614     A     5428     3     392  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
| 5119  | 10616                                   | A | 5430                                | 174   | 247  |   |
| 5120  | 10617                                   | A | 5431                                | 1   | 360  |   |
| 5121  | 10618                                   | A | 5432                                | 1   | 382  |   |
| 5122  | 10619                                   | A | 5433                                | 338   | 442  |   |
| 5123  | 10620                                   | A | 5434                                | 1   | 140  |   |
| 5124  | 10621                                   | A | 5435                                | 3   | 339  | PINFESVGPTYRGSSCLAVVVPEFLG<br>MSVAFVPDWLRGKAEVNQETIQR\L<br>LE*NDQLIRCI\LEYQNKARGNECVQ<br>YQHVLHRNLI\YLATIADAQSQPALS<br>KAMGIIFQKQ   |
| 5125  | 10622                                   | A | 5437                                | 157   | 371  |   |
| 5126  | 10623                                   | A | 5438                                | 150   | 284  |   |
| 5127  | 10624                                   | A | 5439                                | 84  | 901  | ARKSVRMASSRMTRRDPLTNKVAL VTASTDGIGFAIARRLAQDRAHVVV SSRKQQNVDQ\AVATL\QGEGLSVT GTVCHVGKAEDRGAAWWPPAVKL HGGIDILVSNAAVNPFFGSIMDVTE EV\WDKTLDI\NVKGPKP*MTKAVV PEMEKRGGGS\VVIVSSIAAFSPSPG FSPYNVSKTALLGLAQT\LPIEL\APR NIRV\NCLAPG\LIKTSF\SRMLW\MD KEKEESMKETLR\IRRLGEPEDCAGI VSFLCSEDASYITGETVVVG\GGTPS RL                          |
| 5128  | 10625                                   | A | 5440                                | 2   | 468  |   |
| 5129  | 10626                                   | A | 5441                                | 63  | 219  |   |
| 5130  | 10627                                   | A | 5442                                | 3   | 558  |   |
| 5131  | 10628                                   | A | 5443                                | 7   | 909  | DQCEVCRNSEVRPAACPGHSGSPA QGPPRPFRMKAAVLTLAVLFLTGSQ ARHFWQQDEPPQSPWDRVKDLAT VYVDVLKDSGRDYVSQFEGSALGK QLNLKLLDNWDSVTSTF\SKLREQL GPVTQEFWDNLEKETEGLRQEMSK DLEEVKAKVQPYL\DDFQKKW\QEE MELYRQKVEPLRAELQEGARQKLH ELQEKLSPLGEEMRDRARA\HVDAL RTHLAPYSGELRQRLGAR\LGALRE NGGARMGQYHA\QATEHLSTLSEK AKPALEDLRQGLLPVLESFKVSFLS ALEEYTKKLNTQ |
| 5132  | 10629                                   | A | 5444                                | 3   | 195  |   |
| 5133  | 10630                                   | A | 5445                                | 189   | 263  | PPGSHLGHPANAPSH*GPYPGLHS  |
| 5134  | 10631                                   | A | 5446                                | 1905  | 2052   |   |
| 5135  | 10632                                   | A | 5447                                | 1903  | 2050   |   |
| 5136  | 10633                                   | A | 5448                                | 1   | 115  |   |
| 5137  | 10634                                   | A | 5449                                | 1   | 402  | GKTSKLEFSIYLAPHSTTAAIEPYNSI<br>LTTHTTLEHYDWAFMAYNGAIYDI<br>CRRNLDIGRTTYTNLNTLIGQIESSIT<br>ASLRFDGALNGDLT*FQTNLVPYPR<br>IHFPLATYAPVISAEKAYHEQLSVA<br>EITNAC  |
| 5138  | 10635                                   | В | 5450                                | 81  | 319  | XVVEPYNSILTTHTTLEHSDCAFMV<br>DNEAIYDICRRNLDIERPTYTNLNRL<br>IGQIVSSITASLRFDGALNVDLTEFQ<br>TNL*   |
| 5139  | 10636                                   | A | 5451                                | 1   | 422  | GKKSKLEFSIYPAPQVSTAVVEPYN<br>SILTTHTTLEHSDCAFMVDNEAIYDI   |

| SEC ID                                      | SEC ID                                  | A.T. | SEO ID NO                           | Muclandid   | Nucle-4:3                       | IA mine egid seguera - / V. VI-1  |
|---|---|------|-------------------------------------|---|---------------------------------|---|
| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |      | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last codon for last | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|   |   |      |                                     |   |                                 | CRRNLDIERATYTNLNRIIGQIVSSIT<br>ASLRFDGALNVDLTEFQTNLVPYPR<br>MHLPLGTYAPVICAEK/AYHETAFV<br>QKTTCLG*PSQQMW   |
| 5140  | 10637                                   | A    | 5452                                | 771   | 1640                            | ALQLHPHHPHHPWSTLIVPFMVDN EAIYDICRRNLDIERPTYTNLNRVIR A/QMGPSITASLRFDGA\LNV\DLTEF QTNPGAPTPRIHLP/LWPTYAPVHLL AGGKPYHGTAFL*AGGFTNGLVLE ARPTQMGGNVDPW\HGVNYMGLL AWLYRGDVGFPKIDNGWPLPTIKN QAQHSSFVDW/CGPTGLSRFGHSTY QPSTVVPGLETWAKV\QRAV\CML\SNTTAIAE\A*ARLDHKFDLMYAKR AF\VHWYVGEGMKEGEFSEAREDM AALEKDYEEVGVDSVEGEGEEEGE EY  |
| 5141  | 10638                                   | A    | 5453                                | 89  | 435                             |   |
| 5142  | 10639                                   | A    | 5454                                | 2   | 287                             | TNEIEPEEN*HTKARNFRRFVTAINN<br>TPRNIRED/GDHLLHHWIALLADCPI<br>TAHMYEDVALIKDHTLDNSLIRELQ<br>TLQEFNITLETALVKGIDI  |
| 5143  | 10640                                   | В    | 5455                                | 218   | 3940                            | MSGGGGGGSAPSRFADYFVICGL DTETGLEPDELSALCQYIQASKARD GASPFISSTTEGENFEQTPLRRTFKS KVLARYPENVEWNPFDQDAVGML CMPKGLAFKTQADPREPQFHAFIIT REDGSRTFGFALTFYEEVTSKQICSA MQTLYHMHNAEYDVLHAPPADDR DQSSMEDGEDTPVTKLQRFNSYDIS RDTLYVSKCICLITPMSFMKACRSV LQQLHQAVTSPQPPPLPLESYIYNVL YEVPLPPPGRSLKFSGVYGPIICQRP STNELPLFDFPVKEVFELLGVENVF QLFTCALLEFQILLYSQHYQRLMTV AETITALMFPFQWQHVYVPILPASL LHFLDAPVPYLMGLHSNGLDDRSK LELPQEANLCFVDIDNHFIELPEDLP QFPNKLEFVQEVSEILMAFGIPPEGN LHCSESASKLKRLRASELVSDKRNG NIAGSPLHSYELLKENETIARLQALV KRTGVSLEKLEVREDPSSNKDLKV QCDEEELRIYQLNIQIREVFANRFTQ MFADYEVFVIQPSQDKESWFTNRE QMQNFDKASFLSDQPEPYLPFLSRF LETQMFASFIDNKIMCHDDDDKDP VLRVFDSRVDKIRLLNVRTPTLRTS MYQKCTTVDEAEKAIELRLAKIDHT AIHPHLLDMKIGQGKYEPGFFPKLQ SDVLSTGPASNKWTKRNAPAQWRR KDRQKQHTEHLRLDNDQREKYIQE ARTMGSTIRQPKLSNLSPSVIAQTN WKFVEGLLKECRNKTKRMLVEKM GREAVELGHGEVNITGVEENTLIAS LCDLLERIWSHGLQVKQGKSALWS HLLHYQDNRQRKLTSGSLSTSGILL DSERRKSDASSLMPPLRISLIQDMR HIQNIGEIKTDVGKARAWVRLSME |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | KKLLSRHLKQLLSDHELTKKLYKR YAFLRCDDEKEQFLYHLLSFNAVD YFCFTNVFTTILIPYHILIVPSKKLGG SMFTANPWICISGELGETQIMQIPRN VLEMTFECQNLGKLTTVQIGHDNS GLYAKWLVEYVMVRNEITGHTYKF PCGRWLGKGMDDGSLERILVGELL TSQPEVDERPCRTPPLQQSPSVIRRL VTISPNNKPKLNTGQIQESIGEAVNG IVKHFHKPEKERGSLTLLLCGECGL VSALEQAFQHGFKSPRLFKNVFIWD FLEKAQTYYETLEKNEVVPEENWH TRARNFCRFVTAINNTPRNIGQGWQ VSDAGVLGEPEITSYTTGICPAG*  |
| 5144  | 10641                                   | A | 5456                                | 238   | 406  |  |
| 5145  | 10642                                   | A | 5457                                | 2   | 204  |  |
| 5146  | 10643                                   | A | 5458                                | 1   | 431  |  |
| 5147  | 10644                                   | A | 5459                                | 1   | 225  |  |
| 5148  | 10645                                   | A | 5460                                | 3   | 321  |  |
| 5149  | 10646                                   | A | 5461                                |   | 1257   | MSHRKFSAPRHGSLGFLPRKRSSRH RGKVKSFPKDDPSKPVHLTAFLGY KAGMTHIVREVDRPGSKVNKKEVV EAVTIVETPPMVVVGIVGYVETPRG LRTFKTVFAEHISDECKRRFYKNWH KSKKKAFTKYCKKWQDEDGKKQL EKDFSSMKKYCQVIRVIAHTQMRL LPLRQKK\AHLMGDQVERGALWPE KADW\ARER\LEQQVPVNQVF\GQD EMIDVIG\VTQGQKAYKGV\TSRWH TQESCPRKDPTEGLRK\VACIRAW\H PARVAFSVARA\GQ\KGYHHRTEIN K\KIYKIGQGYLIKGG\KLIKNNAST\ DYDL/SLDKSINPSGWAFVHLW*K* PNDFVML\KG\CVVGTKK\RVLTLR KSFAGCRRKRRGFGEELTLSSIDTTS KF\GHGRFQTMEEKKAFMG\PLKKD RIAKEEGA |
| 5151  | 10648                                   | A | 5463                                | 114   |  |  |
| 5152  | 10649                                   | A | 5464                                | 2   | 76<br>951  | CWNSGEVRWPLPPPPPRFVARRKM ADLEEQLSDEEKVRIF\LKFFIHAPPG EINEGFNDVRLLLNNDNLLREGAA HAFAQYNLDQFTPLKIEG\YEDQVLI TEHGRLGEMGKFL\DPKN\RICFKF* SL*GRRATDPKDPC\EV\ENAVESWR TSVETALRAYVKEHYPEWESGTVY GQKNRWDSQTIIACI\ESHQFQAKNF WNGRWRSEWKFTITPSTTQVVG\IL KIQVHYYEDGNVQLVSHKDIQDSL TVSNEVQTAKEFIKIVEAAENEYQT AISENYQTMSDTTFKALRRQLPVTR TKIDWNKILSYKIGKEMQNA   |
| 5153  | 10650                                   | A | 5465                                | 3   | 553  |  |
| 5154  | 10651                                   | В | 5466                                | 26  | 384  | MHHEALSEALPGDNVGFNVKNVSV<br>KDVRRGNVAGDSKNDPPMEAAGF<br>TAQVIILNHPGQISAGYALYWIAIVD<br>MVPGKPMCVESFSDYPPLGRFAVR  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |               | SEQ ID NO:<br>in USSN<br>09/770,160 | location of | location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---------------|-------------------------------------|-------------|------------------------------------|--|
| 5155  | 10652                                   | $\frac{1}{A}$ | 5467                                | 1           | 1254                               | DMRQTVAVGVIKAVDKKAAGLAS*   |
| 5156  | 10653                                   | A             | 5468                                | 1           | 1386                               |  |
| 5157  | 10654                                   | A             | 5469                                | 33          | 1653                               | KLPLKAKMGKEKTHINIVVIGHVDS GKSTTTGHLIYKCGGIDKRTIEKFEK EAAEMGKGSFKYAWVLDKLKAER ERGITIDISLWKFETSKYYVTIIDAPG HRDFIKNMITGTSQAD\CAVL\IVAA GVGEFEAG\ISKNGQTREHALLAYT LGVKQ\LIV\GVNKMDSTEPPYSQK RYEEIVKEVSTYIKKIGYY\PDTLAF EPISGWNGDDMLEPSANMPWFKG WKVTRKDG\NAS\GTTLLEAL\DC\IL PPTRPT\DKPLR\LPLQ\DVYKIGGIG\ TVPVG\RVETGVLKPG\MGVTF\APS QRLQREVKICPKMHHEAFE*SSFLG DNVGF\NVKNVSCQGCSVRGNV*H GDSK\NDPPMEA/SLGFTAQVII\LNH PGPNKAPG*CPWYWDCHTAH\IAC KVCLSLKEKI*F/DRSW*KSLEDGP*I LGSLGDAGHWLIWVPGQAPCVFEK LLKTIPP\LGRFA\VRDNEDRQLCGW VSIKSSWTKKAAGSWAKVTK\SAQ KSSERLKWNIIPNTCHPTLYQVWEE RSQELFGSIGHLSLSSKRLVNDNNA  |
| 5158  | 10655                                   | $\frac{1}{A}$ | 5470                                | 2           | 4966                               | S  |
| 5159  | 10656                                   | A             | 5471                                | 2           | 4821                               | RWPRRARLLRRGRGGGGVESLPHF GAPVPRARLQLTARRGHAGLRARM REAAAALVPPPAFAVTPAAAMEEPP PPPPPPPPPPPPETESEPECCLAARQE GTLGDSACKSPESDLEDFSDETNTE NLYGTSPPSTPRQMKRMSTKHQRN NVGRPASRSNLKEKMNAPNQPPHK DTGKTVENVEEYSYKQEKKIRAAL RTTERDHKKNVQCSFMLDSVGGSL PKKSIPDVDLNKPYLSLGCSNAKLP VSVPMPIARPARQTSRTDCPADRLK FFETLRLLLKLTSVSKKKDREQRGQ ENTSGFWLNRSNELIWLELQAWHA GRTINDQDFFLYTARQAIPDIINEILT FKVDYGSFAFVRDRAGFNGTSVEG QCKATPGTKIVGYSTHHEHLQRQR VSFEQVKRIMELLEYIEALYPSLQAL QKDYEKYAAKDFQDRVQALCLWL NITKDLNQKLRIMGTVLGIKNLSDI GWPVFEIPSPRPSKGNEPEYEGDDT EGELKELESSTDESEEEQISDPRVPEI RQPIDNSFDIQSRDCISKKLERLESE DDSLGWGAPDWSTEAGFSRHCLTSI YRPFVDKALKQMGLRKLILRLHKL MDGSLQRARIALVKNDRPVEFSEFP DPMWGSDYVQLSRTPPSSEEKCSA VSWEELKAMDLPSFEPAFLVLCRVL LNVIHECLKLRLEQRPAGEPSLLSIK QLVRECKEVLKGGLLMKQYYQFM LQEVLEDLEKPDCNIDAFEEDLHKM LMVYFDYMRSWIQMLQQLPQASHS |

| j      | equence | d             | 09/770,160   | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|--------|---------|---------------|--------------|---|--|---|
|        |         |               |              | sequence  | sequence   | LKNLLEEEWNFTKEITHYIRGGEAQ   |
|        |         |               |              |   |  | AGKLFCDIAGML\LKSTGSFLEFGLQ<br>ESCAEFWTSADDSSASDEIIRSVIEIS               |
|        |         |               |              |   |  | RALKELFHEARERASKALGFAKML<br>RKDLEIAAEFRLSAPVRDLLDVLKS                   |
|        |         |               |              |   |  | KQYVKVQIPGLENLQMFVPDTLAE  |
|        |         |               |              |   |  | EKSIILQLLNAAAGKDCSKDSDDVL<br>IDAYLLLTKHGDRARDSEDSWGTW                   |
|        | }       |               |              |   |  | EAQPVKVVPQVETVDTLRSMQVDN  |
|        |         |               |              |   |  | LLLVVMQSAHLTIQRKAFQQSIEGL   |
|        |         | - 1           |              |   | •  | MTLCQEQTSSQPVIAKALQQLKND  |
|        |         |               |              |   |  | ALELCNRISNAIDRVDHMFTSEFDA<br>EVDESESVTLQQYYREAMIQGYNF                   |
|        |         | 1             |              | j   |  | GFEYHKEVVRLMSGEFRQKIGDKYI   |
|        |         |               |              |   |  | SFARKWMNYVLTKCESGRGTRPR   |
|        | ļ       | ļ             |              |   |  | WATQGFDFLQAIEPAFISALPEDDFL<br>SLQALMNECIGHVIGKPHSPVTGLY                 |
|        | ]       | Ì             |              |   |  | LAIHRNSPRPMKVPRCHSDPPNPHLI  |
|        |         |               |              |   |  | IPTPEGFRGSSVPENDRLASIAAELQ  |
|        | ĺ       | - 1           |              |   |  | FRSLSRHSSPTEERDEPAYPRGDSSG  |
|        |         | 1             |              |   |  | STRRSWELRTLISQSKDTASKLGPIE<br>AIQKSVRLFEEKRYREMRRKNIIGQ                 |
|        | i       |               |              |   |  | VCDTPKSYDNVMHVGLRKVTFKW   |
|        |         |               |              |   |  | QRGNKIGEGQYGKVYTCISVDTGEL   |
|        |         |               |              |   |  | MAMKEIRFQPNDHKTIKETADELKI<br>FEGIKHPNLVRYFGVELHREEMYIF                  |
|        |         |               |              |   |  | MEYCDEGTLEEVSRLGLQEHVIRLY   |
|        |         | Ì             |              |   |  | SKQITIAINVLHEHGIVHRDIKGANIF   |
|        |         |               | {            |   | Ì  | LTSSGLIKLGDFGCSVKLKNNAQTM<br>PGEVNSTLGTAAYMAPEVITRAKG                   |
|        |         | -             |              |   |  | EGHGRAADIWSLGCVVIEMVTGKR  |
| ļ      |         |               |              |   |  | PWHEYEHNFQIMYKVGMGHKPPIP  |
|        |         |               |              |   |  | ERLSPEGKDFLSHCLESDPKMRWT<br>ASQLLDHSFVKVCTDEE                           |
| 5160 1 | 10657   | A             | 5472         | 3   | 425  | ASQLEDASTYRYCIDEE   |
|        | 10658   |               | 5473         | 1   | 234  |   |
|        | 10659   |               | 5474         | 3   | 260  |   |
| 5163 1 | 10660   | A             | 5475         | 3255  | 3467   | LNKNLGLIFFFFFFFFFETASRSVT\R<br>LEYSGSILAHCELRLPGSRHSPVVSA               |
|        |         |               |              |   |  | TWEAEAGELPEPRRQRLR  |
|        |         | A             | 5476         | 1   | 4497   |   |
|        |         | A             | 5477<br>5478 | 2   | 891  |   |
|        |         | $\frac{A}{A}$ | 5479         | 27  | 9786<br>13959  | VPFSVAAAEEPAQPARAARPRPGRS   |
| 1      |         |               | 1            |   | 15757  | PGAAPPQLAMDPPRPALLALLALPA   |
|        |         |               |              |   | ļ  | LLLLLAGARAEEEMLENVSLVCPK  |
|        |         |               | ļ            |   | j  | DATRFKHLRKYTYNYEAESSSGVP  |
|        | ]       |               |              |   | ļ  | GTADSRSATRINCKVELEVPQLCSFI<br>LKTSQCILKEVYGFNPEGKALLKKT                 |
| .      |         |               |              |   |  | KNSEEFAAAMSRYELKLAIPEGKQV   |
|        |         |               |              |   |  | FLYPEKDEPTYILNIKRGIISALLVPP   |
|        |         |               | Ì            |   |  | ETEEAKQVLFLDTVYGNCSTHFTV<br>KTRKGNVATEISTERDLGQCDRFKP                   |
|        |         | Į             |              |   | }  | IRTGISPLALIKGMTRPLSTLISSSQS   |
|        |         |               |              | ļ   |  | CQYTLDAKRKHVAEAICKEQHLFL  |
|        |         | ļ             |              |   |  | PFSYKNKYGMVAQVTQTLKLEDTP  |
|        | ]       |               |              |   |  | KINSRFFGEGTKKMGLAFESTKSTS<br>PPKQAEAVLKTVQELKKLTISEQNI                  |

| NO: of nucleo-tide sequence  tho do 9/770,160 in USSN dorpeptide sequence  tho do 9/770,160 in USSN dorpeptide sequence  location of first codon for last amino acid of peptide sequence  QRANLFNKLVTEI PQLIEVSSPITLQAI ILQWLKRVHANPI PEPSAQQLREIFNN ALSHAVNNYHKTI | RGLSDEAVTSLL<br>LVQCGQPQCSTH |
|--|------------------------------|
| sequence sequence for peptide sequence QRANLFNKLVTEL PQLIEVSSPITLQAI ILQWLKRVHANPL PEPSAQQLREIFNN  | LVQCGQPQCSTH                 |
| sequence  QRANLFNKLVTEI PQLIEVSSPITLQAI ILQWLKRVHANPI PEPSAQQLREIFNN   | LVQCGQPQCSTH                 |
| QRANLFNKLVTEI PQLIEVSSPITLQAI ILQWLKRVHANPI PEPSAQQLREIFNN   | LVQCGQPQCSTH                 |
| PQLIEVSSPITLQAI<br>ILQWLKRVHANPL<br>PEPSAQQLREIFNN   | LVQCGQPQCSTH                 |
| ILQWLKRVHANPI<br>PEPSAQQLREIFNN  |                              |
| PEPSAQQLREIFNN   | LIDVVIYLVALL                 |
|  |                              |
|  |                              |
| NYLMEQIQDDCTC  | GDEDYTYLILRVI                |
| GNMGQTMEQLTP   |                              |
| KPSLMIQKAAIQA  |                              |
| EVLLQTFLDDASP  | GDKRLAAYLML                  |
| MRSPSQADINKIVO   | ZILPWEQNEQVK                 |
| NFVASHIANILNSE<br>FVI VESOI BTVA   | ELDIQULKKLVK                 |
| EVLKESQLPTVMD<br>KSVSIPSLDPASAK  | TECNI TEDDNINIV              |
| LPKESMLKTTLTA  |                              |
| EGKGFEPTLEALFO   |                              |
| ALYWVNGQVPDG   |                              |
| TKDDKHEQDMVN   |                              |
| LKSKEVPEARAYL  |                              |
| HDLQLLGKLLLMC  | GARTLQGIPQMI                 |
| GEVIRKGSKNDFFI   |                              |
| PTGAGLQLQISSSG   |                              |
| LEVANMQAELVAI  | KPSVSVEFVTNM                 |
| GIIIPDFARSGVQM   | NTNFFHESGLEA                 |
| HVALKPGKLKFIIP   |                              |
| NTLHLVSTTKTEVI<br>CKQVFPGLNYCTS  |                              |
| SYYPLTGDTRLELI   |                              |
| SATYELQREDRAL  |                              |
| GAKQTEATMTFKY  |                              |
| QIPDFDVDLGTILR   |                              |
| YRLTLDIQNKKITE   | VALMGHLSCDT                  |
| KEERKIKGVISIPRI  |                              |
| WSPAKLLLQMDSS  |                              |
| VAWHYDEEKIEFE  |                              |
| MTSNFPVDLSDYPI   |                              |
| DHRVPQTDMTFRH  |                              |
| WLQKASGSLPYTQ<br>FNLQNMGLPDFHII  | TEMPET REDUCEN               |
| KYTLNKNSLKIEIPI  |                              |
| MLETVRTPALHFK  |                              |
| VPTFTIPKLYQLQV   |                              |
| VYSNLYNWSASÝS  |                              |
| RARYHMKADSVVI  | DLLSYNVQGSG                  |
| ETTYDHKNTFTLSC   |                              |
| NIKFSHVEKLGNNF   |                              |
| SWGPQMSASVHLD  |                              |
| VKIDGQFRVSSFYA   |                              |
| PNTGRLNGESNLRF<br>TGRVEDGTI SI TST   |                              |
| TGRYEDGTLSLTST   |                              |
| SLKYENYELTLKSE<br>SNKMDMTFSKQNA  |                              |
| SLRFFSLLSGSLNSF  |                              |
| DKINSGAHKATLRI   |                              |
| NLKCSLLVLENELN   | •                            |
| KLTTNGRFREHNAI   |                              |
| ELSLGSAYQAMILG   |                              |
| SQEGLKLSNDMMG  | SYAEMKFDHT                   |
| NSLNIAGLSLDFSSK  | KLDNIYSSDKFY                 |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |        | SEQ ID NO:<br>in USSN<br>09/770,160 | first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|--------|-------------------------------------|-------------|---|--|
| -   |   |        |                                     | sequence    | peptide<br>sequence   |  |
|   |   | 1      |                                     |             | sequence  | KQTVNLQLQPYSLVTTLNSDLKYN   |
|   |   |        | 1                                   |             |   | ALDLTNNGKLRLEPLKLHVAGNLK   |
|   | }                                       |        | Ì                                   | }           |   | GAYQNNEIKHIYAISSAALSASYKA<br>DTVAKVQGVEFSHRLNTDIAGLAS  |
|   |   |        | ĺ                                   |             |   | AIDMSTNYNSDSLHFSNVFRSVMAP  |
| 1   |   |        | ļ                                   |             |   | FTMTIDAHTNGNGKLALWGEHTGQ   |
|   |   |        | {                                   |             |   | LYSKFLLKAEPLAFTFSHDYKGSTS  |
|   | }                                       |        | )                                   |             |   | HHLVSRKSISAALEHKVSALLTPAE  |
|   | 1                                       | İ      | Ì                                   |             |   | QTGTWKLKTQFNNNEYSQDLDAY  |
|   |   | ļ      |                                     |             |   | NTKDKIGVELTGRTLADLTLLDSPI<br>KVPLLLSEPINIIDALEMRDAVEKPQ  |
|   | 1                                       | 1      | {                                   | 1           |   | EFTIVAFVKYDKNQDVHSINLPFFET   |
|   |   | 1      |                                     | [           |   | LQEYFERNRQTIIVVLENVQRNLKH  |
|   | }                                       |        | 1                                   |             |   | INIDQFVRKYRAALGKLPQQANDY   |
|   |   |        | ĺ                                   |             |   | LNSFNWERQVSHAKEKLTALTKKY   |
|   |   |        | }                                   |             |   | RITENDIQIALDDAKINFNEKLSQLQ   |
|   |   |        |                                     |             |   | TYMIQFDQYIKDSYDLHDLKIAIANI<br>IDEIIEKLKSLDEHYHIRVNLVKTIH   |
|   | }                                       |        | j                                   |             |   | DLHLFIENIDFNKSGSSTASWIQNVD   |
|   | İ                                       |        |                                     | [           | :   | TKYQIRIQIQEKLQQLKRHIQNIDIQ   |
|   |   |        | ļ                                   | ]           | ı   | HLAGKLKQHIEAIDVRVLLDQLGTT  |
|   |   |        | -                                   | [           |   | ISFERINDVLEHVKHFVINLIGDFEV   |
|   | }                                       |        | 1                                   | }           |   | AEKINAFRAKVHELIERYEVDQQIQ<br>VLMDKLVELAHQYKLKETIQKLSN  |
|   | į.                                      | ł      |                                     | !           |   | VLQQVKIKDYFEKLVGFIDDAVKK   |
|   |   |        | ]                                   |             |   | LNELSFKTFIEDVNKFLDMLIKKLKS   |
|   |   |        |                                     |             |   | FDYHQFVDETNDKIREVTQRLNGEI  |
|   |   |        |                                     |             |   | QALELPQKAEALKLFLEETKATVA   |
|   | <b>[</b>                                |        |                                     |             |   | VYLESLQDTKITLIINWLQEALSSAS<br>LAHMKAKFRETLEDTRDRMYQMDI   |
|   |   |        |                                     |             |   | QQELQRYLSLVGQVYSTLVTYISD   |
|   | }                                       | 1      |                                     |             |   | WWTLAAKNLTDFAEQYSIQDWAK  |
|   |   | 1      |                                     |             |   | RMKALVEQGFTVPEIKTILGTMPAF  |
|   |   |        |                                     |             |   | EVSLQALQKATFQTPDFIVPLTDLRI   |
|   |   |        |                                     |             |   | PSVQINFKDLKNIKIPSRFSTPEFTIL  |
|   |   | -      | į                                   |             |   | NTFHIPSFTIDFVEMKVKIIRTIDQML<br>NSELQWPVPDIYLRDLKVEDIPLARI  |
|   |   |        |                                     |             |   | TLPDFRLPEIAIPEFIIPTLNLNDFQVP   |
|   | }                                       | }      | j                                   |             |   | DLHIPEFQLPHISHTIEVPTFGKLYSI  |
|   |   | į      |                                     |             |   | LKIQSPLFTLDANADIGNGTTSANE  |
|   |   |        |                                     |             |   | AGIAASITAKGESKLEVLNFDFQAN  |
| ,   |   |        |                                     |             |   | AQLSNPKINPLALKESVKFSSKYLR<br>TEHGSEMLFFGNAIEGKSNTVASLH   |
|   |   |        | İ                                   |             |   | TEKNTLELSNGVIVKINNQLTLDSN  |
|   |   |        |                                     |             |   | TKYFHKLNIPKLDFSSQADLRNEIKT   |
|   |   |        |                                     |             |   | LLKAGHIAWTSSGKGSWKWACPRF   |
| ,   |   |        |                                     |             |   | SDEGTHESQISFTIEGPLTSFGLSNKI  |
|   |   |        |                                     |             |   | NSKHLRVNQNLVYESGSLNFSKLEI  |
|   |   |        |                                     |             |   | QSQVDSQHVGHSVLTAKGMALFGE<br>GKAEFTGRHDAHLNGKVIGTLKNS   |
|   |   |        |                                     |             |   | LFFSAQPFEITASTNNEGNLKVRFPL   |
|   |   |        |                                     |             |   | RLTGKIDFLNNYALFLSPSAQQASW  |
|   |   |        |                                     |             |   | QVSARFNQYKYNQNFSAGNNENIM   |
|   |   |        |                                     |             |   | EAHVGINGEANLDFLNIPLTIPEMRL   |
|   |   |        |                                     |             |   | PYTIITTPPLKDFSLWEKTGLKEFLK   |
|   |   |        |                                     |             |   | TTKQSFDLSVKAQYKKNKHRHSIT<br>NPLAVLCEFISQSIKSFDRHFEKNRN   |
|   |   |        |                                     |             |   | NALDFVTKSYNETKIKFDKYKAEKS  |
|   | L                                       | لــــا | L                                   |             |   | THE PROPERTY OF THE PROPERTY O |

| SEQ ID      | SEQ ID   | Me       | SEQ ID NO:   | Nucleotide   | Nucleotide       | Amino acid sequence ( X=Unknown; *=Stop           |
|-------------|----------|----------|--------------|--------------|------------------|---|
| NO: of      | NO: of   |          | in USSN      | 1            | location of last | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide  | d        | 09/770,160   |              | codon for last   | nucleotide insertion)                             |
| sequence    | sequence | [        | 1            |              | amino acid of    |   |
|             |          |          | İ            | sequence     | peptide          | 1   |
| ļ           | <u> </u> | -        | <del> </del> | <del> </del> | sequence         | UDEL PRESIDENCIAL AND A VIEW COR                  |
| 1           | Ì        | -        | {            | Ĭ            | ĺ                | HDELPRTFQIPGYTVPVVNVEVSPF                         |
| 1           | Ì        | ļ        | ļ            | 1            |                  | TIEMSAFGYVFPKAVSMPSFSILGSD                        |
| 1           | 1        | 1        | [            | Í            |                  | VRVPSYTLILPSLELPVLHVPRNLKL                        |
| }           | 1        | l        | j            | 1            |                  | SLPDFKELCTISHIFIPAMGNITYDFS                       |
| 1           | •        | 1        | i            |              |                  | FKSSVITLNTNAELFNQSDIVAHLLS                        |
|             | }        | ]        | j            | }            |                  | SSSSVIDALQYKLEGTTRLTRKRGL                         |
|             | }        | j        | j            | ļ            |                  | KLATALSLSNKFVEGSHNSTVSLTT                         |
| }           | ł        | 1        | ł            | ł            |                  | ·   |
|             |          | 1        |              |              | ĺ                | KNMEVSVATTTKAQIPILRMNFKQE                         |
|             | Į        | İ        | ł            | ł            | 1                | LNGNTKSKPTVSSSMEFKYDFNSSM                         |
| 1           | [        | 1        | 1            | !            |                  | LYSTAKGAVDHKLSLESLTSYFSIES                        |
|             |          | ł        | ļ            | ì            |                  | STKGDVKGSVLSREYSGTIASEANT                         |
|             | ĺ        | 1        | ļ            | Ì            |                  | YLNSKSTRSSVKLQGTSKIDDIWNL                         |
| }           | }        |          | ļ            | ]            |                  | EVKENFAGEATLQRIYSLWEHSTKN                         |
| ł           | }        | ł        |              | 1            |                  | HLQLEGLFFTNGEHTSKATLELSPW                         |
| 1           |          | [        |              | ĺ            |                  |   |
| 1           | 1        | [        |              | 1            |                  | QMSALVQVHASQPSSFHDFPDLGQ                          |
| 1           | 1        | 1        | [            | 1            |                  | EVALNANTKNQKIRWKNEVRIHSG                          |
|             |          |          | 1            | }            |                  | SFQSQVELSNDQEKAHLDIAGSLEG                         |
| ]           |          |          |              |              |                  | HLRFLKNIILPVYDKSLWDFLKLDV                         |
| ]           | ļ        | Ì        | )            | ļ            |                  | TTSIGRRQHLRVSTAFVYTKNPNGY                         |
| 1           |          | 1        |              | {            |                  | SFSIPVKVLADKFIIPGLKLNDLNSV                        |
| 1           |          | ĺ        |              | 1            |                  | LVMPTFHVPFTDLQVPSCKLDFREI                         |
|             |          | 1        |              | ļ            |                  | QIYKKLRTSSFALNLPTLPEVKFPEV                        |
|             |          | )        |              | j            |                  |   |
| 1           |          |          |              | i            |                  | DVLTKYSQPEDSLIPFFEITVPESQLT                       |
| 1           |          | ł        |              |              |                  | VSQFTLPKSVSDGIAALDLNAVANK                         |
|             |          | 1        | }            | } .          |                  | IADFELPTIIVPEQTIEIPSIKFSVPAGI                     |
| ,           |          |          |              | } !          |                  | AIPSFQALTARFEVDSPVYNATWSA                         |
|             |          |          |              |              |                  | SLKNKADYVETVLDSTCSSTVQFLE                         |
| ]           |          | •        |              | ļ            |                  | YELNVLGTHKIEDGTLASKTKGTFA                         |
| } ,         |          | Ì        |              | }            |                  | HRDFSAEYEEDGKYEGLQEWEGKA                          |
| 1 1         |          |          |              |              |                  | 7   |
| ĺ           |          | !        |              |              |                  | HLNIKSPAFTDLHLRYQKDKKGIST                         |
| 1           |          | <b> </b> |              |              |                  | SAASPAVGTVGMDMDEDDDFSKW                           |
| 1           |          |          |              |              |                  | NFYYSPQSSPDKKLTIFKTELRVRES                        |
| {           |          |          | ı            |              |                  | DEETQIKVNWEEEAASGLLTSLKDN                         |
| ļ !         |          |          |              |              |                  | VPKATGVLYDYVNKYHWEHTGLT                           |
|             |          | [        |              |              |                  | LREVSSKLRRNLQDHAEWVYQGAI                          |
| [           |          |          |              |              |                  | REIDDIDERFQKGASGTTGTYQEWK                         |
| 1 1         |          |          |              |              |                  | DKAQNLYQELLTQEGQASFQGLKD                          |
|             |          |          |              | l            |                  |   |
| ) !         |          |          |              | ļ <u>'</u>   |                  | NVFDGLVRVTQEFHMKVKHLIDSLI                         |
| }           |          |          |              |              | !                | DFLNFPRFQFPGKPGIYTREELCTMF                        |
| }           |          |          |              |              |                  | IREVGTVLSQVYSKVHNGSEILFSYF                        |
|             |          |          | l            |              |                  | QDLVITLPFELRKHKLIDVISMYREL                        |
| ļ ļ         |          |          |              | ļ            |                  | LKDLSKEAQEVFKAIQSLKTTEVLR                         |
|             |          |          |              |              |                  | NLQDLLQFIFQLIEDNIKQLKEMKFT                        |
|             |          |          | i            |              | •                | YLINYIQDEINTIFNDYIPYVFKLLKE                       |
|             |          |          |              |              |                  |   |
| ]           |          |          |              | ļ <u></u>    |                  | NLCLNLHKFNEFIQNELQEASQELQ                         |
|             | !        |          |              | 1            |                  | QIHQYIMALREEYFG\PSGVGWTVK                         |
|             |          |          |              |              |                  | YYEGEEKIVSLIKNLLVALKDFHSE                         |
| )           |          |          |              | !            |                  | YIVSASNF\TSQLSSQVEQFLHRNIQ                        |
|             |          | [        |              |              |                  | EYLSILTDPDGKGKEKIAELSATAQ                         |
|             | Ì        | İ        |              | İ            |                  | EIIKSQAI\ATKKIISDYHQQFRYKLQ                       |
| [           |          |          |              | 1            |                  | DFSDQLSDYYEK\FIAESKRLI\DLSI                       |
| [ ]         | j        |          |              | ļ            |                  |   |
|             | ì        |          | į.           | ł            | Ì                | QN\YHTFLDYTSREFNWKKLAIQPQ                         |
|             | ſ        | [        |              | [            | ĺ                | SLNPYMKLAPGELYYHPLIFLKEIFN                        |
|             |          |          | ľ            | ì            | }                | LFFFSNLNFSHRHRKNCKLPILIKPY                        |
|             |          |          |              | 1            |                  | SEPALQ  |
| 5168        | 10665    | A        | 5480         | 2            | 316              | 1111  |
| 5169        | 10666    | A        | 5481         | 2            | 401              |   |
| 5170        | 10667    | A        | 5482         | 126          | 415              |   |
| 21/0        | 10001    | ~~       | 3702         | 120          | 417              | L   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|-----|-------------------------------------|---|--|---|
| 5171  | 10668                                   | A   | 5483                                | 3   | 499  |   |
| 5172  | 10669                                   | A   | 5484                                | 1   | 241  |   |
| 5173  | 10670                                   | A   | 5485                                | 12  | 308  |   |
| 5174  | 10671                                   | В   | 5486                                | 394   | 565  | MSAEERLRSSGVLSQKVIAHSLGFD<br>KHGNRLGRGKGYYDAYLKRCLQH<br>QEVKPYTLALAFKEQICLQVPVNEN<br>DMK*   |
| 5175  | 10672                                   | В   | 5487                                | 674   | 807  | MSAEERLRSSGVLSQKVIAHSEYQK<br>SKRISIFLSMQDEIETEEIIKDIFQRGK<br>ICFLPSVRVPEQSHGYGLGFDKHGN<br>RLGRGKGYYDAYLKRCLQHQEVK<br>PYTLALAFKEQICLQVPVNENDIK*  |
| 5176  | 10673                                   | A   | 5488                                | 113   | 339  |   |
| 5177  | 10674                                   | A   | 5490                                | 2   | 388  | FLFFFEMESRSVAQAGVQWCDLG<br>SLQPPPP\GLSDSPALASSVSWITDV<br>RHHLWLIFVFLVETGFRHVGQASLK<br>LPTSGDLPTLASQSAGITGVSHYAW<br>LIFVFLVETEFHHVGQAGLELLAPS<br>DPPA  |
| 5178  | 10675                                   | С   | 5491                                | 197   | 415  | MLLYVGLEPHHTHMLSLWPPRLMF<br>PSVFFFFFFFFFLRQGLALLPRLECS<br>GAILAHCNLHLLGSGDSLASAF*   |
| 5179  | 10676                                   | A   | 5492                                | 768   | 1081   | KGVLFFFFKTES\HSVAQAGV\QW<br>CTLGSLQPP/PSRGSSDSPASASRVA<br>GIRGVHHHARLIFVFLVETGFHYVG<br>QAGLELPTSGDSPASASQSAGVTGV<br>SHQCPA  |
| 5180  | 10677                                   | A   | 5494                                | 305   | 477  |   |
| 5181  | 10678                                   | A   | 5495                                | 1   | 903  |   |
| 5182  | 10679                                   | A   | 5496                                | 111   | 295  | KPATSVPVIVCVCSSAKPELPLCPAT<br>YTEHHAGQPHWWYHAAR/DLVSW<br>K*QISQRGEINPH  |
| 5183  | 10680                                   | A   | 5497                                | 1   | 505  |   |
| 5184  | 10681                                   | A   | 5498                                | 3   | 345  |   |
| 5185  | 10682                                   | A   | 5499                                | 1   | 1416   |   |
| 5186  | 10683                                   | A   | 5500                                | 618   | 707  |   |
| 5187  | 10684                                   | C   | 5501                                | 1729  | 2511   | MDIASTNTSNKSDTNMEQVPATND TIKRLESKLLKNQAKQQSESGRLSL GASRGSSVESLPPTSEGKRMSADMS EIEARIAATTGNGQPRRRSIQDLTVT GTEPGQVSSRSSSPSVRMITTSGPTS EKPTRSHPWTPDDSTDTNGSDNSIP MAYLTLDHQLQPLAPCPNSKESMA VFEQHCKMAQEYMKVQTEIALLLQ RKQELVAELDQDEKDQQNTSRLVQ EHKKLLDENKSLSTYYQQCKKQLE VIRSQQQKRQGTS* |
| 5188  | 10685                                   | A   | 5502                                | 1   | 3489   |   |
| 5189  | 10686                                   | A   | 5503                                | 1   | 246  |   |
| 5190  | 10687                                   | A   | 5504                                | 40  | .124   | NVPQFTAKAPCKHEKCLNTNSPDLF<br>EAC*DNIDQTAVSLTAPKTGKRK*R<br>NKVQLS**PQFTAKAPCKHEKCLNT<br>NSPDLFEAC  |
| 5191  | 10688                                   | A   | 5505                                | 156   | 1001   | GIQQFGQYCLNMLQINQLLSKIKLA<br>NPKEKTAMYLVNELARFNRVQPQY<br>KLLD*RGPAHSKMFSVQLSLGEQT<br>WESEGSSIKKAQQAVGNKALTESTL  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | PKPI*KPPKSNVNNNPGCITPTVELN<br>GLAMKRGRACHPQAIRSKAIPK**S<br>*LQLSSHV*SEVS\FPIPKIFYVQLTV<br>GNNEFFGEGKTRQAARHNAAMKA<br>LQALQNEPI/LRKISSGMVNQERIW<br>MMTK/HANKSEISLVFEIALKRNMP<br>VSFEVIKESGPPHMKSFVTRVSVGE<br>FSAEGEGNSKK   |
| 5192  | 10689                                   | A | 5506                                | 175   | 411  |   |
| 5193  | 10690                                   | A | 5507                                | 198   | 381  |   |
| 5194  | 10691                                   | A | 5508                                | 137   | 346  |   |
| 5195  | 10692                                   | A | 5510                                | 3   | 136  |   |
| 5196  | 10693                                   | Α | 5511                                | 2   | 673  |   |
| 5197  | 10694                                   | Α | 5512                                | 1   | 257  |   |
| 5198  |   | A | 5513                                |   | 712  | PRKT/PPAPH\DGDRKELPRTKLLPP API\STD*SQHADRGTEP/GPIRPSIEP GPPVQFGTSDKDSDLRLVVGDSLIA EKELPASVTEAIPVSRDWQLLGSGA ASAEPQSKNLDSGHCVPEHSSSGQR LYPEVFYGSAGPSSSQISGGAMDF\H LAFGSGQGRHLEKGPPDGQRSLGPE GTRSLGCPHPAEGVPLAPYPRGLYI DYKY/MKGERGGRGGVLGLGPHFP SSPFPWSPVPGAVC  |
| 5199  | 10696                                   | A | 5514                                | 2   | 322  |   |
| 5200  | 10697                                   | A | 5515                                |   | 6470   | MSDRSGPTAKGKDGKKYSSLNLFD TYKGKSLEIQKPA\VAPRHGLQSLG KVAIARR/MRPPANLPSLKAENKGN DPNVSLVPKDGTGWASKQEQSDPK SSDASTAQPPESQPLPASQTPASNQP KRPPAAPENTPLVPSGVKSWAQAS VTHGAHGDGGRASSLLSRFSREEFP TLQAAGDQDKAAKERESAEQSSGP GPSLRPQNSTTWRDGGGRGPDELE GPDSKLHHGHDPRGGLQPSGPPQFP PYRGMMPPFMYPPYLPFPPPYGPQG PYRYPTPDGPSRFPRVAGPRGSGPP MRLVEPVGRPSILKEDNLKEFDQLD QENDDGWAGAHEEVDYTEKLKFS DEEDGRDSDEEGAEGHRDSQSASG EERPPEADGKKGNSPNSEPPTPKTA WAETSRPPETEPGPPAPKPPLPPGDY PDRGGPPCKPPAPEDEDEAWRQRR KQSSSEISLAVERARRREEEERRM QEERRAACAEKLKRLDEKFGAPDK RLKAEPAAPPAAPSTPAPPPAVPKE LPAPPAPPPASAPTPETEPEEPAQAP PAQSTPTPGVAAAPTLVSGGGSTSS TSSGSFEASPVEPQLPSKEGPEPPEE VPPPTTPPVFKVEPKGDGIGPTRQPP SQGLGYPKYQKSLPPRFQRQQQEQ LLKQQQQHQWQQHQQGSAPPTPVP PSPPQPVTLGAVPAPQAPPPPKALY PGALGRPPPMPPMNFDPRWMMIPP YVDPRLLQGRPPLEFYPPGVHPSGL VPRERSDSLGLSSEPFDRHAPAMLR ERGTPPVDPKLAWVGDVFTATPAE |

| nucleo-tide  | SEQ ID<br>NO: of<br>peptide<br>sequence |       | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
|--------------|---|-------|-------------------------------------|-------------------------|--|---|
|              |   |       |                                     | sequence                | sequence   |   |
|              |   |       |                                     | <del> </del>            |  | PRPLTSPLRQAADEDDKGMRSETPP   |
| j            |   | 1     | 1                                   | j                       | j  | VPPPPPYLASYPGFPENGAPGPPISR  |
|              |   |       |                                     | ſ                       |  | FPLEEPGPRPLPWPPGSDEVAKIQTP  |
|              |   |       | ŀ                                   | ļ                       |  | PPKKEPPKEETAQLTGPEAGRKLPA   |
| 1            |   | -     | [                                   |                         |  | SRSGAGPPPPRRESRTETRWGPRPG   |
| ļ            |   | 1     | į                                   |                         |  | SSRRGIPPEEPGAPPRRAGPIKKPPPP   |
| [            |   | 1     |                                     | [                       |  | TKVEELPPKPLEQGDETPKPPKPDPL  |
| j            |   |       | ]                                   |                         |  | KITKGKLGGPKETPPNGNLSPAPRL   |
| 1            |   | 1     |                                     |                         |  | RRDYSYERVGPTSCRGRGRGEYFA  |
| ŀ            |   | 1     |                                     | Į                       |  |   |
|              |   |       |                                     | 1                       |  | RGRGFRGTYGGRGRGG/RSEFRSYR   |
| į            |   | 1     |                                     | 1                       |  | EFRGDDGRGGGTGGPNHPPAPRGR  |
| ļ            |   | Ì     |                                     |                         |  | HASETRSEGSEYEEIPKRCRQRGSET  |
| }            |   | 1     |                                     | )                       |  | GSETHESDLAPSDKEAPTPKEGTLT   |
|              |   |       |                                     |                         |  | Q/VPLAPPPPGAPP\SP\APARFTC/RG  |
| 1            |   | )     | }                                   | 1                       |  | GRRVFTPR/GVPSRRGRGGGR/PPPQ  |
| ĺ            |   |       |                                     | 1                       |  | VCPGWSPPAKSLAPKKPPTGPLPPS   |
| j            |   |       |                                     |                         |  | KEPLKEKLIPGPLSPVARGGSNGGS   |
|              |   | 1     |                                     |                         |  | NVGMEDGERPRRRRHGRAQQQDK   |
| ,            |   |       |                                     | }                       |  | PPRFRRLKQERENAARGSEGKPSLT   |
| ì            |   |       |                                     |                         |  | LPASAPGPEEALTTVTVAPAPPRAA   |
| ł            |   | 1     |                                     |                         |  | AKSPDLSNQNSDQANEEWETASESS   |
|              |   |       |                                     |                         |  | DFTSERRGDKEAPPPVLLTPKAVGT   |
| 1            |   |       |                                     | 1 1                     |  | PGGGGGAVPGISAMSRGDLSQRA   |
|              |   |       |                                     | ]                       |  | KDLSKRSFSSQRPGMERQNRRPGPG   |
|              |   | 1 1   |                                     | {                       |  | GKAGSSGSSSGGGGGGGGGTGPG   |
| Ī            |   |       |                                     | ļ                       |  | RGDKRSWPSPKNRSRPPEERPPGLP   |
| 1            |   | 1 1   |                                     | 1                       |  | LPPPPPSSSAVFRLDQVIHSNPAGIQ  |
| ļ            |   |       |                                     |                         |  | QALAQLSSRQGSVTAPGGHPRHKP  |
| 1            |   | 1 1   |                                     | 1                       |  | GPPQAPQGPSPRPPTRYEPQRVNSG   |
| 1            |   |       |                                     |                         |  | LSSDPHFEEPGPMVRGVGGTPRDSA   |
| - (          |   | 1 1   |                                     |                         |  | GVSPFPPKRRERPPRKPELLQEESLP  |
| ŀ            |   |       |                                     |                         |  | PPHSSGFLGSKPEGPGPQAESRDTG   |
| }            |   |       |                                     | 1                       |  | TEALTPHIWNRLHTATSRKSYRPTS   |
|              |   |       |                                     |                         |  | MEPWMEPLSPFEDVAGTEMSQSDS  |
|              |   | 1 [   |                                     |                         |  | GVDLSGDSQVSSGPCSQRSSPDGGL   |
| ]            |   | l j   |                                     | . ,                     |  | KGAAEGPPKRPGGSSPLNAVPCEGP   |
| 1            |   |       |                                     |                         | į  | PGSEPPRRPPPAPHDGDRKELPREQP  |
|              |   | , l   |                                     |                         |  | LPPGPIGTERSQRTDRGTEPGPIRPS  |
| . 1          |   |       | ĺ                                   |                         | 1  | HRPGPPVQFGTSDKDSDLRLVVGDS   |
|              |   | ]     |                                     |                         |  | LKAEKELTASVTEAIPVSRDWELLP   |
| 1            |   |       |                                     | ĺ                       | ĺ  |   |
| j            |   |       |                                     |                         | ļ  | SAAASAEPQSKNLDSGHCVPEPSSS   |
|              |   |       | 1                                   |                         | l  | GQRLYPEVFYGSAGPSSQISGG\A  |
|              |   |       |                                     |                         |  | MDSQLHPNSGG/FRPGTPSLHPYRS   |
| [            |   |       | ĺ                                   | 1                       | [  | QPLYLPPGPAPPSALLSGVALKGQF   |
| 1            |   |       |                                     | ļ                       |  | LDFSTMQATELGKLPAGGVLYPPPS   |
| [            |   |       | [                                   | 1                       | 1  | FLYSPAFCPSPLPDTSLLQVRQDLPS  |
| j            |   |       | }                                   | ŀ                       | }  | PSDFYSTPLQPGGQSGFLPSGAPAQ   |
|              |   |       |                                     | [                       |  | QMLLPM\VDSQLPVV\NFGSLPPAPP  |
| 1            |   |       | ]                                   |                         |  | PAPPPLSLLPVGPALQPPSFVVRPQS  |
| [            |   | ĺĺ    |                                     | ĺ                       |  | SPSTGVL\P*LARPFPVYF\GRTELH\P  |
| ļ            |   | }     |                                     | j                       | ,  | VNIKPFRDF\QKLSSNLGGPGSSRTP  |
| ĺ            |   |       | İ                                   |                         | ľ  | P\TGRRPSSLRSFSGLNSRLQSQRLS  |
|              |   |       |                                     |                         |  | NLTSGVF\RNQAASTFYQAGLPHPD   |
| 1            |   | -     | ĺ                                   |                         | [  | ALRWIPKPWERTG\RPPR\DGPSRR\  |
|              |   |       |                                     |                         | j  | AEEP\GSRGDKEP\GLPPPR  |
|              | 10698                                   | A     | 5516                                | 2                       | 119  | <del></del>   |
|              |   | 4 - 1 |                                     | _ ,                     | 117  | 1   |
| 5201<br>5202 | 10699                                   | A     | 5517                                | $\frac{2}{1}$           | 325  | FFFFF*DRVSLLLPKLECNGTISAHC  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | QLRHY*IFYDGTRSLYAG*YSQNLLI<br>YSAPRQPQYHFKDMNKILDSIQRSY<br>TKI  |
| 5203  | 10700                                   | Ā | 5518                                | 228   | 481  | QFFRNTIFF*DRVSLLLPKLECNSAIS AHHNLCLPGSSDSPASASRVAGITG TCHHTRLL\FVFLVETGFYHVSQSG LELLTSGD  |
| 5204  | 10701                                   | A | 5519                                | 175   | 431  | LIVKMPFLK*SWKIF*MSK**VMLIH *GFVFLFVC\FF*DRVSLLLPRLECN GPISAHRNLHLPDSSDSPASAYIKGF VRQLSHEE   |
| 5205  | 10702                                   | A | 5520                                | 257   | 453  | TKGGGYTQRTAIQFILFIYLFIY*DG<br>VSLLLPRLE*NGAISAHCNLHLPGSS<br>DSQKKTKKNFCTQ   |
| 5206  | 10703                                   | A | 5521                                | 277   | 1230   | ISFHLSTFGAPSFFFFEMEFSLLLPR LECNGAISAHRNLRLPGSSDSPASAS PVGWDYRHVHPRSANFVFFFSRDG VSPCWSGLVSNSRPQMIPPSRPPKV LDTGLATMPGLCLANFCGRNRVSL MCPSWSPELKQSTCLSLPKCWDYR RAAVPGLFILFFLRHRCPTLTQDEV QWCDHSSLQPSTPEIKHPPASASQSS WDQRHAPLHLANFYFYF*FFETES\ HSVT\RLECSGAILAHCNLCLPGSSY SPAPAS*VAGTTGAH/RRLANFFVFL VEMGFHHVRQVDARSLDLVICLPR PPKVLGLQDVSHHRPAYF                           |
| 5207  | 10704                                   | A | 5522                                | 1   | 467  | FFFLF*EGVSLLLPRLECSGAISA/HC NLHLPGSSDSPASASQEDGITGVRY HAWLIL/VFLVEIGFHHVGQADLKP *PQVIHPPLFFFFLRQSFALVAQAGV QWCDLSSLQTPPPRVQGILLAQPPE YLVAGFTGMRHHTRLFFFFAFLVET GFHPC  |
| 5208  | 10705                                   | A | 5523                                | 293   | 681  | QGTILIGLCPFDITPAIVDILLAFWHV<br>R\CPRPTVSCFCKKVVLLV*NFFFFF<br>FFF\ETESCSVTRLECSGVILAHCNL<br>RLPGSSDSHASASRVAETTGVRHHA<br>WPIFVFLVETRFHHVGQAGLELLTS<br>GD   |
| 5209  | 10706                                   | A | 5524                                | 274   | 321  |   |
| 5210<br>5211                                | 10707                                   | A | 5525<br>·5527                       | 2   | 733 3555   | MHYVLNSSSMETFVGEQNYEGSSR LCVCKRTREADDPSARDSVCEGVR ARFNICGINQIVLKCPIWGCENPAQ MGCPPVGKADRCGLLANSATCEKG MFCHADLVGITPTVFPSHPRCKTTA SAKLACQQDVDLDRQSLSSIDKNPS ERGQSQLSNPTDDSWKGRPYANQK LFASLLIKCVVQLELIQTIDNIVFYPA TSKKEDAEHMVAAQQDTLDADIHI ETEDQGMYKYMSSQHLFKLLDCLQ ESHSFSKAFNSNYEQRTVLWRAGF KGKSKPNLLKQETSSLACCLRILFR MYVDENRRDSWEEIQQRLLTVCSE ALAYFITVNSESHREAWTSLLLLLL |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | 1 | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|---|--|
| 5212  | 10709                                   |   | 5520                                |                         |   | MQFDLIPELRAVLRKFFLRIGVVYKI WIPEEPSQARCRAILPGFECEAERRQ ERVVPATVRGWGSLLRFCIPTSSYN KCLLNMYCVPDPIAMELSDANLQT LTEYLKKTLDPDPAIRRPAEKFLESV EGNQNYPLLLLTLLEKSQDNVIKVC ASVTFKNYIKRNWRIVEDEPNKICE ADRVAIKANIVHLMLSSPEQIQKQL SDAISIIGREDFPQKWPDLLTEMVN RFQSGDFHVINGVLRTAHSLFKRYR HEFKSNELWTEIKLVLDAFALPLTN LFKICDNAALYAQKYDEEFQRYLPR FVTAIWNLLVTTGQEVKYDLLVSN AIQFLASVCERPHYKNLFEDQNTLT SICEKVIVPNMEFRAADEEAFEDNS EEYIRRDLEGSDIDTRRRAACDLVR GLCKFFEGPVTGIFSGYVNSMLQEY AKNPSVNWKHKDAAIYLVTSLASK AQTQKHGITQANELVNLTEFFVNHI LPDLKSANAIMRSFSLLQEAIIPYIPT LITQLTQKLLAVSKNPSKPHFNHYM FEAICLSIRITCKANPAAVVNFEEAL FLVFTEILQNDV/PSESVDQYRKQIFI LLFQRLQNSKTTKFIKSK*NHLDVL QK**KK\MFGMVLEKIIIPEIQKVSG NVEKKICAVGITKLLTECPPMMDTE YTKLWTPLLQSLIGLFELPEDDTIPD EEHFIDIEDTPGYQTAFSQLAFAGK KEHDPVGQMVNNPKIHLAQSLHKL STACPGRSCGSSPVEDGVCIGAPRSP TASVCFPSLVGSINGPAPAPPPPTVR TTSSGWHCGGACARKARRGPSGRS ALSRLDRSGPS |
| 5212  | 10709                                   | A | 5528<br>5529                        | 58                      | 4611  | COL DOLLA CAMPOGATON CONDUCTION  |
| 3213  | 10/10                                   |   | JJ27                                | J0                      | 3051  | CQLRSAAGVPSSVSVSPRDPIAMEL SDANLQTLTEYLKKTLDPDPAIRRP AEKFLESVEGNQNYPLLLLTLLEKS QDNVIKVCASVTFKNYIKRN\WRIV EDEPNKICEADRVAIKANIVHLMLS SPEQIQ\KQ\LSDAISI\IGREDFPQ\KW PDL\LTEM\VNRFQSGDFHVINGVLR TAHSLFKRY\RHEFK\SNE\LWTE\IK LVLDAFALP\LTYLF\KATIELCST\H ANDASALRILFSSLILISKLFYSLNFQ DLPEFF\EDNMETWMNNFHTLLTLD NKLLQTDDEEEAGLLELLKSQICDN AALYAQKYDEEFQRYLPRFVTAIW NLLVTTGQEVKYDLLVSNAIQFLAS VCERPHYKNLFEDQNTLTSICEKVI VPNMEFRAADEEAFEDNSEEYIRRD LEGSDIDTRRRAACDLVRGLCKFFE GPVTGIFSGYVNSMLQEYAKNPSV NWKHKDAAIYLVTSLASKAQTQKH GITQANELVNLTEFFVNHILPDLKSA NVNEFPVLKADGIKYIMIFRNQVPK EHLLVSIPLLINHLQAGSIVVHTYAA HALERLFTMRGPNNATLFTAAEIAP FVEILLTNLFKALTLPGSSENEYIMK   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         | Sequence   | AIMRSFSLLQEAIIPYIPTLITQLTQK LLAVSKNPSKPHFNHYMFEAICLSIR ITCKANPAAVVNFEEALFLVFTEILQ NDVQEFIPYVFQVMSLLLETHKNDI PSSYMALFPHLLQPVLWERTGNIPA LVRLLQAFLERGSNTIASAAADKIP GLLGVFQKLIASKANDHQGFYLLNS IIEHMPPESVDQYRKQIFILLFQRLQ NSKTTKFIKSFLVFINLYCIKYGALA LQEIFDGIQPKMFGMVLEKIIIPEIQK VSGNVEKKICAVGITNLLTECPPMM DTEYTKLWTPLLQSLIGLFELPEDD TIPDEEHFIDIEDTPGYQTAFSQLAF AGKKEHDPVGQMVNNPKIHLAQSL HMLSTACPGRVPSMVSTSLNAEAL QYLQGYLQAASVTLL   |
| 5214  | 10711                                   | A | 5530                                | 1                       | 396  |  |
| 5215  | 10712                                   | Α | 5531                                | 1                       | 1095   |  |
| 5216  | 10713                                   | A | 5532                                | 1                       | 1077   |  |
| 5217  | 10714                                   | A | 5533                                | 1                       | 986  |  |
| 5218  | 10715                                   | В | 5534                                | 214                     | 975  | MEVKTKARELRDECTSLSSRFDQLE ERVLVMENQMNQMKQEEKFREKRI KRNEQSLQEIWDYVKRPNLRVIGVP ESDGENGTKLENTLQDIIQENFPNL ARKANIQIQETQRMPQRYSSRRATP RHIIVRFTKVEMKETMLRAAREKG RVTHKGKPIRLTADLSAETLQAKRE WGPIFNILKEKNFQPRISYPAKLSFIS EGEIKSFTDKQMLRDFVTTRPALKE LLKEALNMERNNQYQHCKNMPNC KDHPG*   |
| 5219  | 10716                                   | A | 5535                                | 3                       | 1135   |  |
| 5220  | 10717                                   | Α | 5536                                | 1                       | 1023   |  |
| 5221  | 10718                                   | A | 5537                                | 2                       | 2747   | LHLWGQGTDKQKDSSNLCRLKCPC LTALKRAVVLPARSWRSENGQTAS SKGKLTTRKDIYTENPSVHHHHQRP KVDKTTKMGKKQNRKTGNSKKQS ASPPPKERSASPPPKERSSSPATEQS WREN/DLFDFDELRAEGFKRSNYSE LWEDIQTKGKEVENFEKNLEECITRI TNTEKCLKELMELKTKARELCEEC RSLRSRCDQLEERVSAMEDEVKMN EMNEMKREGKFREKRIKRNEQSLQ EIWDYVKRPNLRLTGVPESDGENG TKLENTLQDIIQENFPNLARQANVQI QEIQRTPQRYSSRRATPRHIIVRFTK VEMKEKILRAAREKGRVTLKGKPIR LTADLSAETLQARREWGPIFNILKE KNFQPRISCPAKLSFISEGEIKYFTDK QMLRDF\VTTKPALQELLKEALNME RNNRSPSSSPATEQSWMENDFDELR EEGFRRSNYSELREDIQTKGKEVEN FEKNLEECITRITNTEKCLKELMELK TKARELREECRSLRSRCDQLEERVS AMEDEMNEMKREGKFREKRIKRNE QSLQEIWDYVKRPNLRLIGVPESDV ENGTKLENTLQDIIQENFPNLARQA NVQIQEIQRTPHRFSSRRATTRNLIV |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |                | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----------------|-------------------------------------|---|--|--|
| 5222  |   |                |                                     |   |  | RFTKVEMKEKMLRAAREKGRVTH KGKPIRLTADLLAETLQARREWGPI FNILKEKNFQPRISYPAKLSFISEGEI KYFTEKQMLRDFVTTSPALEELLKE ALNMERNNRTTRQKVNKDIQELNS ALHQADLIDISRTLHPKSTEYTFFSA PHHTYSKIDHIVGSKALLSKCKRTEI ITKCLSDHSAIKLELRIKKLTQNCTT TWKLNNLLLNDYWVQNEMKAEIK MFFENNENKDTTYQNLWDTFKAV CRGKFIALNAHKRKQKRSKTDTLTS QLKELEKEEKHIQKLAEGKK   |
| 5222  | 10719                                   | $+\frac{A}{A}$ | 5538                                | 99  | 432  |  |
| 5223  | 10720                                   | A              | 5539                                | 242   | 732<br>1300  | NPRRSGHSLEAKLRDSSYSELLRDIL QKHEAVHMEALDELYEALAETLM AKESTQGHRSYLLPSGGSVTLSEST AIISHGTTGLVTWDATLYLAEWAIE NPAAFTNRTVLELGSGAGLTGLAIC KDVPPPGIHLQRTCHSRVLEQLRGN VPS\NGLSLEADITAKLDSPRVTVAQ LDWDVATVHQLSAFQPDVVIAADV LYCPEAIMSLVGVLRRLAACREDQ RAPEVYVAFTVRNPETCQLFTTELA PSTCEGVLSLSHLTDKDIRTHRGQA TLELLQTAARPPGSRASTIHPSLPMP RASAPAPPEHSPSWQPCAQMHPQQ PLPAHRDTDNPVPVHVGQPVNYRA NKQAST                                  |
| 5225  | 10722                                   | TA             | 5541                                | 3   | 167  |  |
| 5226  | 10723                                   | A              | 5542                                | 2   | 378  |  |
| 5227  | 10724                                   | A              | 5543                                | 3   | 359  |  |
| 5228  | 10725                                   | A              | 5544                                | 15  | 347  |  |
| 5229  | 10726                                   | В              | 5545                                | 141   | 371  | DFGYFYGSSYVAAPDSSRTPGLSRS<br>RDGLLVAKLDLNLCQQVNDVWNF<br>KMTGRYEMYARELAEAVKSNYSPT<br>IVKE*  |
| 5230  | 10727                                   | A              | 5546                                | 1   | 1154   | MAGAEWKSLEECLEKHLPLPDLQE VKRVLYGKELRKLDLPREAFEAAS REDFELQGYAFEAAEEQLRRPRIVH VGLVQNRIPLPANAPVAEQVSALHR RIKAIVEVAAMCGVNIICFQEAWTM PFAFCTREKLPWTEFAESAEDGPTT RFCQKLAKNHDMVVVSPILERDSE HGDVLWNTAVVISNSGAVLGKTRK NHIPRVGDFNESTYYMEGNLGHPV FQTQFGRIAVNICYGRHHPLNWLM YSINGAEIIFNPSATIGALSESLWPIE ARN\AAIANHCFTCAINRVGTEHFP NEFTSGDGKKAHQDFGYFYGSSYV AAPDSSRTPGLSRSRDGLLVAKLDL NLCQQVNDVWKFKITGRYEMYAR ELAEAVKSNYSPTIVKE |
| 5231  | 10728                                   | A              | 5547                                | 424   | 604  |  |
| 5232  | 10729                                   | A              | 5548                                | 52  | 318  |  |
| 5233  | 10730                                   | A              | 5549                                | 3   | 148  |  |
| 5234  | 10731                                   | A              | 5550                                | 258   | 458  |  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho           | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---------------|-------------------------------------|---|--|--|
| 5235  | 10732                                   | A             | 5551                                | 1   | 217  |  |
| 5236  | 10733                                   | A             | 5552                                | 246   | 361  | <del> </del>   |
| 5237  | 10734                                   | C             | 5553                                | 69  | 254  | MDHLYNXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 5238  | 10735                                   | A             | 5554                                | 32  | 169  | NPVPPYPLCPALVFFLLLIYLLIY*PS<br>PLLRMSAPAGKGFLFLSL  |
| 5239  | 10736                                   | A             | 5555                                | 417   | 490  |  |
| 5240  | 10737                                   | A             | 5556                                | 2   | 121  |  |
| 5241  | 10738                                   | A             | 5557                                | 69  | 398  |  |
| 5242  | 10739                                   | A             | 5558                                | 2   | 732  | GRVPSQCGWIRMRSRSCREDQKPG MDDQRDLISNNEQLSMLGRRPGAP ESKCSRGCPLHSAFSILVTLLLVVQA INAY\FLYH*HGRLDKLTVTPQNLQ LENL\RMKLP\KPPKPVSKMRMATP LL\MQALPMGALPQGPMQNATKYG NMTEDHVMHLLQNADPLKVYPPL KGSFPENLRHLKNTMETIDWKVFES WMHHWLLFEMSRHSLEQKPTDAPP KESLELEDPSSGLGVTKQDLGPVPM |
| 5243  | 10740                                   | A             | 5559                                | 2   | 359  |  |
| 5244  | 10741                                   | A             | 5560                                | 2444  | 2755   | DYYYFFEMESCSVAQAGVQWRDL<br>GSLQPPPP\SSRDSSASASRVAGTTG<br>MHH/HNQLSFVFLVKMGFHHVGQA<br>DFELLTSSDLPVSASQSAGITGVSHR<br>ARPLSS  |
| 5245  | 10742                                   | A             | 5561                                | 1724  | 1941   | AHLLYEWIFFFFFFEMESHSVAQA<br>GVLWRDLSSLQAPPPG\SQSDSPAS<br>ASWVAGITGACHHARHEWNFKC  |
| 5246  | 10743                                   | A             | 5562                                | 2   | 362  |  |
| 5247  | 10744                                   | A             | 5563                                | 138   | 236  |  |
| 5248  | 10745                                   | A             | 5564                                | 1   | 278  |  |
| 5249  | 10746                                   | A             | 5565                                | 80  | 591  | RGCKREGLSMSSLIRRVISTAKAPG A\IGPPTVQAVLV\DRTHLHFRDQIG HGPLPSWTSLCPGGVAGRSLNKLL KNMGEIPESLPGCDF\TNVVKTTCSS GLDINDLQLLFNEILQTVFSRSNFPA RAAYPSWLLLPQKGSRI\EIEA\VAIQ GPLTTAFILSGDPCCVVWDC   |
| 5250  | 10747                                   | A             | 5566                                | 141   | 340  |  |
| 5251  | 10748                                   | A             | 5567                                | 209   | 386  |  |
| 5252  | 10749                                   | A             | 5568                                | 1   | 346  |  |
| 5253  | 10750                                   | A             | 5569                                | 160   | 391  |  |
| 5254  | 10751                                   | A             | 5570                                | 101   | 332  |  |
| 5255  | 10752                                   | A             | 5571                                | 500   | 752  |  |
| 5256  | 10753                                   | A             | 5572                                | 2   | 82   |  |
| 5257  | 10754                                   | A             | 5573                                | 3   | 165  |  |
| 5258  | 10755                                   | A             | 5574                                | 1   | 219  |  |
| 5259  | 10756                                   | A             | 5575                                | 1   | 327  |  |
| 5260  | 10757                                   | $\frac{A}{A}$ | 5576                                | 2   | 160  | <del></del>  |
| 5261  | 10758                                   | A             | 5577                                | 1   | 189  | QQLRHPDLHLQRRSQAQQHQGGQ<br>DS*AQMLCRVPTVPSTTCGRTVSLP<br>LPPKTQGHPHDLPDP  |
| 5262  | 10759                                   | Α             | 5578                                | 2   | 224  |  |
| 5263  | 10760                                   | A             | 5579                                | 1   | 1392   |  |
| 5264  | 10761                                   | A             | 5580                                | 1   | 1272   | PGCGRPRAFSLNIADIEEKRGFTSHF<br>VRQTPSPSPNNL*YLIYRRYRQFHA  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |                | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----------------|-------------------------------------|-------------------------|--|--|
|   |   |                |                                     |                         |  | LQSKLEERFGPDSKSSALACTLPTLP GRRPLPSCCCRAAVRIPALNAYMK VPVGLATLARGRALPPWDPLQGSG CLWSLSTQSQPSVSPDLCAWSLVR* PRQALGARVLDVRIFFYQSPYDSEQ VPQALRRLRPRTRKV*VTSPWAST WPEPAAPRAEVTPAPTLARLSHCNF KAGDVIFLLSRINKDWLEVSSEVRM EVRLKVFVKILKDFPEEDDPTNWLR CYYYEDTISTIKSVAWEGGACPAFL PSLRPLPLTSPSHGSLSHSKAPSGSQ MSHNAVTSHQRPGWPGQPHSPFPH PTLKDLLELTR*GAGNGAGELDTLD AEGDLVRLLSDEDVALMVRQARGL PSQKRLFPWKLHITQKDNYRVYNT MP   |
| 5265  | 10762                                   | A              | 5581                                | 437                     | 728  |  |
| 5266  | 10763                                   | A              | 5582                                | 570                     | 1648   | TQPGTGWARLSTCSLGPSPTMAVA QQLRAESDFEQLPDDVAISANIADIE EKRGFTSHFVFVIEVKTKGGSKYLI YRRYRQFHALQSKLEERFGPDSKSS ALACTLPTLPAKVYVGVKQEIAEM RIPALNAYMKSLLSLPVWVLMDED VRIFFYQSPYDSEQVPQALRRLRPR TRKVKSVSPQGNSVDRMAAPRAEA LFDFTGNSKLELNFKAGDVIFLLSRI NKDWLEGTVRGATGIFPLSFVKILK DFPEEDDPTNWLRCYYYEDTISTIK DIAVEEDLSSTPLLKDLLELTRREFQ REDIALNYRDAEGDLVRLLSDEDV ALMVRQARGLPSQKRLFPWKLHIT QKDNYR\VYNTMP   |
| 5267  | 10764                                   | A              | 5583                                | 1705                    | 2233   |  |
| 5268  | 10765                                   | $\overline{A}$ | 5584                                | 1                       | 354  |  |
| 5269  | 10766                                   | Ā              | 5585                                | 270                     | 390  |  |
| 5270  | 10767                                   | A              | 5586                                | 3                       | 132  |  |
| 5271  | 10768                                   | A              | 5587                                | 234                     | 362  |  |
| 5272  | 10769                                   | A              | 5588                                | 1                       | 402  |  |
| 5273<br>5274                                | 10770                                   | A              | 5589                                | 3                       | 509  | ODD DOXID ODVIV VIVODOVICE CONTROL OF THE CONTROL O |
| 32/4  | 10771                                   | A              | 5590                                | ,                       | 1607   | SPRPGIPRCFHLVISTEHRRVMTEFG LSWVFLVAIFKGVQCEVQLVESGG DLVQPGGSLRLSCAASGFTFSSYAM HWVRQAPGKGLKYVSGISSNGRRT YYANSVKGRFTISRDNSKNTLYLQ MGSLRAEDMAVYYCARGGDHIVP AAVAPFHMDVWGQGTTVTVSSASP TSPKVFPLSLCSTQPDGNVVIACLPG PGLLPPGATQCDLERKRTGRDRQK LPTQPGCLRGPVHHEQPADPAGHT VPSRQVRDMPREALHESQPGCDCA LPSSLNSTYPISLNSTYPISLMLPPPT VTAPTGPSKDLFLGSKATFTCTLPG L\RDASGVTFTWDALKVGKSAVQG P\*RRDLCG\CYSV\SSVLPGCAEAH GTHGEGPSLWHCWPYPESKDPA*PP TLFKIRGNTFPGPRFHLL\PPPSEGAG PWNELVTL\TCLGIGLSAPRMLLVC   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |     | SEQ ID NO:<br>in USSN<br>09/770,160 | location of | location of last<br>codon for last | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|-------------|------------------------------------|---|
|   |   |     |                                     |             |                                    | WVAGGHRSLLREKY\LTWA\SRQKP<br>SQGTTTFAVTSILRVAAEDWKKGD<br>TFSCMVGHEALPLAFTQKTIDRLAG<br>KPTHVNVSVVMAEVDGTCY   |
| 5275  | 10772                                   | A   | 5592                                | 2           | 315                                |   |
| 5276<br>5277                                | 10773                                   | A A | 5593<br>5594                        | 245         | 455                                | 1470  |
|   |   |     |                                     |             | 2863                               | MIFPAESSCALPQEGSAGPGSPGSAP PSRKRSWSSEEESNQATGTSRWDG VSKKAPRHHLSVPCTRPREARQEAE DSTSRLSAESGETDQDAGDVGPDPI PDSYYGLLGTLPCQEALSHICSLPSE VLRHVFAFLPVEDLYWNLSLVCHL WREIISDPLFIPWKKLYHRYLMNEE QAVSKVDGILSNCGIEKESDLCVLN LIRYTATTKCSPSVDPERVLWSLRD HPLLPEAEACVRQHLPDLYAAAGG VNIWALVAAVVLLSSSVNDIQRLLF CLRRPSSTVTMPDVTETLYCIAVLL YAMREKGINISNSKKTIQLTHEQQLI LNHKMEPLQVVKIMAFAGTGKTST LVKYAEKWSQSRFLYVTFNKSIAK QAERVFPSNVICKTFHSMAYGHIGR KYQSKKKLNLFKLTPFMVNSVLAE GKGGFIRAKLVCKTLENFFASADEE LTIDHVPIWCKNSQGQRVMVEQSE KLNGVLEASRLWDNMRKLGECTEE AHQMTHDGYLKLWQLSKPSLASFD AIFVDEAQDCTPAIMNIVLSQPCGKI FVGDPHQQIYTFRGAVNALFTVPHT HVFYLTQSFRFGVEIAYVGATILDV CKRVRKKTLVGGNHQSGIRGDAKG QVALLSRTNANVFDEAVRVTEGEF PSRIHLIGPEEERRKREYPPGLGALE GRTQVTGTRKKQAQSESGTRFPPEK GELVLLSSHDEGENLVIKDKFIRRW VHKEGFSGFKRYVTAAEDKELEAKI AVVEKYNIRIPELVQRIEKCHIEDLD FAEYILGTVHKAKGLEFDTVHVLD DFVKVPCARHNLPQLPALR\VEPFS\ EDEW\NLLYVAVTRAKKRLIM\TKS LENILTLAGEYFLQAELTSNVLKTG VVR\CCVG\QCNNAIPVDTVLTMKK L\PITY*ATGK\ENKGGYLCHSCAEQ RIGPLAFLTASPEQVRAMERTVENI VLPRHEALLFLVF |
| 5278  | 10775                                   | A   | 5595                                | 3           | 613                                |   |
| 5279  | 10776                                   | A   | 5596                                | 2           | 1419                               | PPHLLSSPFVAAPRARATAGAFTLS ASAMQEIAHLQAGQCGNQIGAKFW EVISDEHGIDPTGTYHGDSDLQLERI NVYYNEATG\GNYVPRAVLVDLEP GTMDSVRSGPFGQIFRPDNFVFGQS GAGNNWAKGHYTEGAELVDAVLD VVRKEAESCDCLQGFQLTHSLGGG TGSGMGTLLISKIREEFPDRIMNTFS VVPS\PKCQDTVVEPYNATLSVHQL VENTDETYCIDNEALYDICFRTLKL TTPTYGDLNHLVSATMSGVTTCLRF PGQLNADLRKLAVNMVPFPRLHFF   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     | -   |  | MPAFAPLTSRGSQQYRGLTVPELTQ<br>QMFDAKNMMAACDPRHGRYLTVA<br>AVFRGRMSMKEVDEQMLSVQSKN<br>SSYFVEWIPNNVKTAVCDIPPRGLK<br>MAVTFIGNSTAIQELFKRISEQFTAM<br>FRRKAFLHWYTGEGMDEMEFTEAE<br>SNMNDLVSEYQQYQDATAEQGEFE<br>EEAEEEVA  |
| 5280  | 10777                                   | A | 5603                                | 1   | 384  |   |
| 5281  | 10778                                   | A | 5604                                | 185   | 700  |   |
| 5282  | 10779                                   | A | 5605                                | 1   | 414  |   |
| 5283  | 10780                                   | A | 5606                                | 3   | 138  |   |
| 5284  | 10781                                   | A | 5607                                | 1   | 433  | NNPDFKAGV/MALPTL/LQIQRHDD<br>YLVMLKAIRILVQERLTQDAVAKA<br>NQTKEGLPVALDKHILGFDTGDAV<br>LNEAAQILRLLHIEELRELQTKINEA<br>IVAVQAIIHFWHVWKSKCHILGGGS<br>PENWVCSRDLPPLLIAFFFNKV  |
| 5285  | 10782                                   | A | 5608                                | 1   | 459  |   |
| 5286  | 10783                                   | A | 5609                                | 118   | 375  | VAVVQIIFLPVFIAEKYKDLVPDNSK<br>TADNATKNAEPLINLDVNNPDFKA<br>GVMALANLLQIQRHDDYLVMLK\A<br>IRILVQERLTQD  |
| 5287  | 10784                                   | A | 5610                                | 344   | 513  |   |
| 5288  | 10785                                   | A | 5611                                | 3   | 116  |   |
| 5289  | 10786                                   | A | 5612                                | 3   | 869  | HEVFSRPRPGEPNREAGTMFRRRLT VLDYHNPAGFNCKDETEFRNFIVW LEDQKIRHYKIEDRG\NLRNIHSSDW PK\FFEKY\LRDVNCPFKIQDRQE\AI DWLLGFAVRPEYG\DNAEKY\KDLV P\DNSK\TADNAPKNAEPWIN\LDVN NPDFK\AGVMALG*PAFRFQRHDD\ FLVNA*RQFRIWVQE\RLT\QDA\VA KAKSNKKRALPVALAQTHILGFD\T GDASSLMKLLEILRIACTYEELRELT DQKSTKAIVAVQAIYC*SQRQDHRL GKSLEDEHFEDLQLSPLL |
| 5290  | 10787                                   | A | 5613                                | 298   | 403  |   |
| 5291  | 10788                                   | A | 5614                                | 3   | 611  |   |
| 5292  | 10789                                   | A | 5615                                | 192   | 340  |   |
| 5293  | 10790                                   | A | 5616                                | 187   | 361  |   |
| 5294  | 10791                                   | A | 5617                                | 187   | 385  |   |
| 5295<br>5296                                | 10792                                   | A | 5618<br>5619                        | 1   | 702  | EKYIQLVRQRALEGALGNTIIYKSQ<br>TAKGTPQETEGTSSGSKSNVRSGKR<br>VPSGRMV/IHSHFPAEVT*E*TRVH<br>WIWQS*CQGESWKQPVPFLCHSGS*<br>RNALL\CLRHDVDALLWQPHSSKQ<br>DDMWEHIATFNALGYVQASKRDK<br>KFFACAPNYSYAALCECLRRVFIYR<br>QPAPMSTVLYNKKGRQA\VGQVAK<br>QQVASLETNDPNLGIQAT\NERLFV<br>LTTKNLFLIKVNTEN                                      |
| 5297  | 10794                                   | A | 5620                                | 3   | 357  |   |
| 5298  | 10795                                   | A | 5621                                | 1   | 1926   |   |
| 5299  | 10796                                   | A | 5622                                | 1   | 362  | LQTSDEETGFSCLFEYVCAATSFVL<br>VCIINNWSCKAD*DTRWTFRIKIGR  |

| SEQ ID NO: of nucleo-tide sequence  SEQ ID NO: of peptide sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|--|-----|-------------------------------------|-------------------------|--|---|
|  |     |                                     |                         |  | T/SVVDLLYWRDINITGVVFGATLFL<br>LLSLTVFSIVSVTAYIALALLSVTISF<br>TIYKGVSHAIPKSDEGHPF  |
| 5300 10797   | Α   | 5623 .                              | 247                     | 533  | KSFPGWQTYFSCGWVGCGCLGRGS<br>QNASPPASPLPQLPPG*RRSWPLRG<br>TACRSWSALSGWAAGLYHPPRMPP<br>LMWEAGAGSPGELRGTRIRRER   |
| 5301   10798   | A   | 5624                                | 128                     | 667  |   |
| 5302 10799   | A   | 5625                                | 12                      | 3756   | VPRLSRPSPSQSSPTPTTARGSETRP RRRRQQLQHHLHPPAMEDLDQSPL VSSSDSPPRPQPAFKYQFVREPEDEE EEEEEEEDEDEDLEELEVLERKPA AGLSAAPVPTAPAAGAPLMDFGND FVPPAPRGPLPAAPPVAPERQPSWD PSPVSSTVPAPSPLSAAAVSPSKLPE DDEPPARPPPPPPASVSPQAEPVWTP PAPAPAAPPSTPAAPKRRGSSGSVD ETLFALPAASEPVIRSSAENMDLKE QPGNTISAGQEDFPSVLLETAASLPS LSPLSAASFKEHEYLGNLSTVLPTE GTLQENVSEASKEVSEKAKTLLIDR DLTEFSELEYSEMGSSFSVSPKAESA VIVANPREEIIVKNKDEEEKLVSNNI LHNQQELPTALTKLVKEDEVVSSEK AKDSFNEKRVAVEAPMREEYADFK PFERVWEVKDSKEDSDMLAAGGKI ESNLESKVDKKCFADSLEQTNHEK DSESSNDDTSFPSTPEGIKDRSGAYI TCAPFNPAATESIATNIFPLLGDPTSE NKTDEKKIEEKKAQIVTEKNTSTKT SNPFLVAAQDSETDYVTTDNLTKV TEEVVANMPEGLTPDLVQEACESEL NEVTGTKIAYETKMDLVQTSEVMQ ESLYPAAQLCPSFEESEATPSPVLPD IVMEAPLNSAVPSAGASVIQPSSSPL EASSVNYESIKHEPENPPPYEEAMS VSLKKVSGIKEEIKEPENINAALQET EAPYISIACDLIKETKLSAEPAPDFSD YSEMAKVEQPVPDHSELVEDSSPDS EPVDLFSDDSIPDVPQKQDETVMLV KESLTETSFESMIEYENKEKLSALPP EGGKPYLESFKLSLDNTKDTLLPDE VSTLSKKEKIPLQMEELSTAVYSND DLFISKEAQIRETETFSDSSPIEIIDEF PTLISSKTDSFSKLAREYTDLEVSHK SEIANAPDGAGSLPCTELPHDLSLK NIQPKVEEKISFSDDFSKNGSATSKV LLPPDVSALATQAEIESIVKPKVLV KEAEKKLPSDTEKEDRSPSAIFSAEL SKTSVVDLLY\WRDIKKT\GVVFGA/ SAVFLLLS\LTVF\SIVSVTAYIALAL LSVT\ISF\RIYKGVIQAIQKS\DEGHP FRAISGNL/ESCLYLRELGSGRYSNS\ ALGSMWNCTVKGNFRAPSFFSWM |

| SEQ ID             | SEQ ID         |   | SEQ ID NO:            |                  | Nucleotide          | Amino acid sequence ( X=Unknown; *=Stop                                 |
|--------------------|----------------|---|-----------------------|------------------|---------------------|---|
| NO: of nucleo-tide | NO: of peptide | tho   | in USSN<br>09/770,160 | focation of      | location of last    | codon; /=possible nucleotide deletion; \=possible nucleotide insertion) |
| sequence           | seguence       | ď   | )                     | for peptide      | amino acid of       | nucleotide insertion)   |
| -                  | 1              |   |                       | sequence         | peptide<br>sequence |   |
| 5303               | 10800          | A   | 5626                  | 2                | 436                 | RRQFEERQQEMEHVYELLENKMQL  |
| ŧ                  | Ì              |   |                       |                  | ;                   | LQEESRLAKNEAARMAALVEAEKE  |
|                    | 1              | 1   | 1                     |                  | (                   | CNLELSEKLKGVTKNWEDVPGDQV  |
| ]                  | }              | ļ   | ļ                     |                  | j                   | KPDQ\YTEALAQRDK*VPSVLFL\RL  |
|                    |                |   |                       |                  | ĺ                   | SFAHSQGIQQLSCSLSRT/RQ*ELHY  |
| 5304               | 10801          | A   | 5627                  | <del> </del>   3 | 309                 | F*DFMGPQPKTFFSGLNFQWYPL   |
| 5305               | 10802          | В   | 5628                  | 454              | 645                 | MTCKKENFSLKLLIYFLEERMQQK  |
|                    |                | 1   |                       | 1                |                     | YEASREDIYKRNTELKVEVESLKRE   |
|                    | 10000          | <u>ا</u> ــــــــــــــــــــــــــــــــــــ |                       |                  |                     | LQDKKQPSGLKPWA*   |
| 5306<br>5307       | 10803          | $\frac{A}{A}$                                 | 5629<br>5630          | 1 1 1 1 1 1      | 294                 |   |
| 5308               | 10804          | $\frac{A}{A}$                                 | 5631                  | 201              | 228<br>350          |   |
| 5309               | 10806          | $\frac{A}{A}$                                 | 5632                  | 262              | 626                 | PSARPHCFGLEAMHARSLPCWNCS  |
| 000,               | 10000          | 1   | 3002                  | 202              | 020                 | SRRLLILAFS/WGSE/CCTRKPRIIDV   |
| !                  |                |   |                       | ]                |                     | VYNASNNELVRTKTLVKNCIVLIDS   |
|                    |                | 1   |                       | 1                |                     | TPYR\QWYESH\YALPLGRKKGAKL   |
|                    |                | 1   |                       | )                |                     | TPEEEEILNKKRSKKIQKKYDERKE   |
|                    |                |   |                       | 1                |                     | NAKISSLLEEQFQQGKLLACIASRPK  |
|                    |                | 1   |                       | }                |                     | QCGRADGYVLEGKELEFYLRK\IKA   |
|                    |                |   |                       |                  |                     | RKRQINPCFVFTHGNRGVYCFVPTF<br>MLPEYMTVFSAIFPCPAKLIWGGGL                  |
|                    | 1              | -{  |                       |                  | Ť.                  | QPLALTSASYCPETGSPHC   |
| 5310               | 10807          | A   | 5633                  | 3                | 452                 |   |
| 5311               | 10808          | A   | 5634                  | 26               | 477                 | NSTDSERTHHGARLLPDKTNVKAA  |
|                    | }              |   |                       |                  |                     | WG\KVGAHAG\EYGAEALERMFLSF   |
|                    |                |   |                       |                  |                     | PT\TKTYFPHFDL\SHG\SAQVKG/HT   |
|                    | <b>{</b>       |   |                       |                  |                     | GKKVADALTNAVANV\DDMPN\AL<br>SALSDLHAHKLRVDPVNFKLLSHCL                   |
|                    |                |   |                       |                  |                     | AGGPWAAHLPRPSSTPGGATPSLEQ   |
|                    |                |   |                       |                  |                     | SSWASC  |
| 5312               | 10809          | A   | 5635                  | 1                | 147                 |   |
| 5313               | 10810          | A   | 5636                  | 1                | 503                 | AAAARAARGTAGPWRSAARLPALP  |
|                    | }              |   |                       | 1                |                     | ASSLGAAAMAASAKRKQEEKHLK<br>MLRDMTGLPHNRKCFDCDQRGPTY                     |
|                    |                |   |                       |                  |                     | VNMTVGSFVCTSCSGSLRG*NPPHR   |
|                    |                |   |                       | ĺ                |                     | VKSISMTTFTQQEIEFLQKHGNEVC   |
|                    |                |   |                       |                  |                     | P\PEQAKVVASVHASISGSSASSTSS  |
| 5014               |                | 1_  |                       |                  |                     | TPEVRPLKSLLGDSAPTLHLN   |
| 5314<br>5315       | 10811<br>10812 | A   | 5637<br>5638          | 272              | 360<br>1934         | WDDDDD CDI CDI WWDWCDDTTAD  |
| 3313               | 10012          |   | 3036                  | 1                | 1934                | WRRRRLSRLCRLVWPVSPRTTAP<br>GPRRAQYSQAAAAGSGAGGARRR                      |
|                    | :              | 1 1   |                       | 1 1              |                     | RAAAAARAARGTAGPRRSAARLPA  |
|                    |                | ] ]   |                       |                  |                     | LPASSLGAAAMAASAKRKQEEKHL  |
|                    |                |   |                       | (                |                     | KMLRDMTGLPHNRKCFDCDQRGPT  |
|                    |                |   |                       |                  |                     | YVNMTVGSFVCTSCSGSLRGLNPPH   |
|                    |                |   |                       |                  |                     | K/VGKSISMTTFTQQEIEFLQKHGNE  |
| ŀ                  |                |   |                       |                  |                     | VCKQIWLGLFDDRSSAIPDFRDPQK   |
|                    |                |   |                       |                  |                     | VKEFLQEKYEKKRWYVPPEQAKVV<br>ASVHASISGSSASSTSSTPEVKPLKS                  |
| ĺ                  |                | 1 1   |                       |                  |                     | LLGDSAPTLHLNKGTPSQSPVVGRS   |
|                    |                |   |                       | Į                |                     | QGQQEKKQFDLLSDLGSDIFAAPA  |
|                    |                |   |                       | [                | ĺ                   | PQSTATANFANFAHFNSHAAQNSA  |
|                    |                |   |                       |                  | j                   | NADFANFDAFGQSSGSSNFGGFPTA   |
| ĺ                  |                |   |                       |                  |                     | SHSPFQPQTTGGSAASVNANFAHFD   |
| }                  |                |   |                       |                  | ł                   | NFPKSSSADFGTFNTSQSHQTASAV   |
|                    |                |   |                       | L                |                     | SKVSTNKAGLQTADKYAALANLDN  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |    | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon                          | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----|-------------------------------------|--|--|---|
|   |   |    |                                     |  |  | IFSAGQGGDQGSGFGTTGKAPVGSV<br>VSVPSQSSASSDKYAALAELDSVFS<br>SAATSSNAYTSTSNASSNVFGTVPV<br>VASAQTQPASSSVPAPFGRTPSTNPF<br>VAAAGPSVASSTNPFQTNARGATA<br>ATFGTASMSMPTGFGTPAPYSLPTS<br>FSGSFQQPAFPAQAAFPQQTAFSQQ<br>PNGAGFAAFGQTKPVVTPFGQVAA<br>AGVSSNPFMTGAPTGQFPTGSSSTN<br>PFL   |
| 5316  | 10813                                   | A  | 5639                                | 1  | 307  |   |
| 5317  | 10814                                   | A  | 5640                                | 957  | 3132   | GEEEPLWQGCSAGLPWLPAEPLCK* RREKPRFCAAYQRPLCGHAEKQAR *PLGPWCSRR\KKKGAEEEKPKRRR QEKQAACPFYNHEQMGLLRDEALA EVKDMEQLLALGKEARACPYYGSR LAIPAAQLVVLPYQMLLHAATRQA AGIRLQDQVVIIDEAHNLIDTITGMH SVEVSGSQLCQAHSQLLQYVERYG KRLKAKNLMYLKQILYLLEKFVAV LGGNIKQNPNTQSLSQTGTELKTIN DFLFQSQIDNINLFKVCVPSAPQMK HGHCRLNPKLVTQISNSDCPRVQRY CEKSMISRKLFGFTERYGAVFSSRE QPKLAGFQQFLQSLQPRTTEALAAP ADESQASTLRPASPLMHIQGFLAAL TTANQDGRVILSRQGSLSQSTLKFL LLNPAVHFAQVVKECRAVVIAGGT MQPVSDFRQQLLACAGVEAERVVE FSCGHVIPPDNILPLVICSGISNQPLE FTFQKRELPQMMDEVGRILCNLCG VVPGGVVCFFPSYEYLRQVHAHWE KGGLLGRLAARKKIFQEPKSAHQV EQVLLAYSRCIQACGQERGQVTGA LLLSVVGGKMSEGINFSDNLGRCV VMVGMPFPNIRSAELQEKMAYLDQ TLPRAPGQAPPGKALVENLCMKAV NQSIGRAIRHQKDFASVVLLDQRYA RPPVLAKLPAWIRARVEVKATFGPA IAAVQKFLQVYGTSLPLNHLSKLQD |
| 5210  | 10915                                   | +- | 5641                                | <del>                                     </del> | 1669   | TFYPNTSNYAKGR   |
| 5318  | 10815                                   | A  | 5641<br>5642                        | 947  | 1668<br>2782   | GEEPLWQGCSAGLPWLPAEPLCK* RREKPRFCAAYQRPLCGHAEKQAR\ KKKGAEEEKPKRRRQEKQAACPFY NHEQMGLLRDEALAEVKDMEQLL ALGKEARACPYYGSRLAIPAAQLV VLPYQMLLHAATRQAAGIRLQDQV VIIDEAHNLIDTITGMHSVEVSGSQL CQAHSQLLQYVERYGKRLKAKNL MYLKQILYLLEKFVAVLGGNIKQNP NTQSLSQTGTELKTINDFLFQSQIDN INLFKVQRYCEKSMISRKLFGFTER YGAVFSSREQPKLAGFQQFLQSLQP RTTEALAAPADESQASTLRPASPLM HIQGFLAALTTANQDGRVILSRQGS LSQSTLKFLLLNPAVHFAQVVKECR AVVIAGGTMQPVSDFRQQLLACAG  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ 1D NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide location of last codon for last amino acid of peptide sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|---|---|
|   |   |   |                                     |                         |   | VEAER\VVEF/SCGHVIPPDNILPLVI<br>CSGISNQPLEFTFQKRELPQMIFQEP<br>KSAHQVEQVLLAYSRCIQACGQER<br>GQVTGALLLSVVGGKMSEGINFSD<br>NLGRCVVMVGMPFPNIRSAELQEK<br>MAYLDQTLPRAPGQAPPGKALVEN<br>LCMKAVNQSIGRAIRHQKDFASVV<br>LLDQRYARPPVLAKLPAWIRARVE<br>VKATFGPAIAAVQKFHREKSASS  |
| 5320  | 10817                                   | A | 5643                                | 1143                    | 3233  | GEEPLWQGCSAGLPWLPAEPLCK* RREKPRFCAAYQRPLRGHAEKQAR\ KKKGAEEEKPKRRRQEKQAACPFY NHEQMGLLRDEALAEVKDMEQLL ALGKEARACPYYRSRLAIPAAQLV VLSYQMLLHAATRQAAGIRLQDQV VIIDEAHNLIDTITGMHSVEVSGS\Q LCQAHSQLLQYMERYGKRLKAKN LMYLKQILYLLEKFVAVLGGNIKQ NPNTQSLSQTGTELKTINDFLFQSQI DNINLFKVQRYCEKSMISRKLFGFT ERYGAVFSSREQPKLAGFQQFLQSL QPRTTEALAAPADESQASVPQPASP LMHIEGFLAALTTANQDGRVILSRQ GSLSQSTLKFLLLNPAVHFAQVVKE CRAVVIAGGTMQPVSDFRQQLLAC AGVEAERVVEFSCVFGPSLALT\GH VIPPDNILPLVICSGISNQPLEFTFQK RELPQMMDEVGRILCNLCGVVPGG VVCFFPSYEYLRQVHAHWEKGGLL GRLAARKKIFQEPKSAHQVEQVLL AYSRCIQACGQERGQVTGALLLSV VGGKMSEGINFSDNLGRCVVMVG MPFPNIRSAELQEKMAYLDQTLPRA PGQAPPGKALVENLCMKAVNQSIG RAIRHQKDFASIVLLDQRYARPPVL AKLPAWIRARVEVKATFGPAIAAV QKVSPTFFFLRASPPRDHISHCLLSA OFHREKSASS |
| 5321  | 10818                                   | A | 5644                                | 3                       | 744   |   |
| 5322  | 10819                                   | C | 5645<br>5646                        | 187                     | 366   | MDERDSHCPYLLSSETTAKGTGLAE<br>SAGKEDPVELDSSLEARVRRRRPST<br>SMPLTSAPC*  |
| 5324  | 10821                                   | A | 5647                                | 1                       | 382   | TADCAKPVPLAVVSLDSRYGQWES<br>RSSIHA\VTN*ASSSSSSSSSSS\FSR\V<br>YPRFIEFIHFDIQSTGQ/RITSR*HPPR/<br>DLRDALF*LNSLIPLVRTSSKSAARR<br>RP\GEAPRGTAVPGADPAGGTRPR  |
| 5325  | 10822                                   | A | 5648                                | 3                       | 684   | QGPRAALGALFPCWAPGKYVHGV<br>RAKHPRATARAPRGSP/LPPHRVSE<br>KTIRVVVFHRRPAGPADPAPGPSRG<br>HRGGAG/EPPTYSTPLMSLHRARLE<br>SSSTGSSFPADSAKPVPLAVVSLDSR<br>*GQWESRSSIHA\VTN*ASSSSSSSS<br>SS\FSR\VYPRFIEFLHFDIQSTGQ/RIT<br>SRQHPPR/DLRDALF*LNSRIPLVRTS<br>SKSAARRRP\GEAPRGTAAPGADPA<br>GGP  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon for peptide | location of last<br>codon for last<br>amino acid of | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|-----|-------------------------------------|-------------------------------------|---|---|
|   |   |     |                                     | sequence                            | peptide<br>sequence                                 |   |
| 5326  | 10823                                   | A   | 5649                                | 2                                   | 331   |   |
| 5327  | 10824                                   | A   | 5650                                | 3                                   | 340   |   |
| 5328  | 10825                                   | A   | 5651                                | 1                                   | 94  |   |
| 5329  | 10826                                   | A   | 5652                                | 2                                   | 496   | ASMGCSSPLLSLLSLLVGAWLKLG H*TAGHAGGAGKGDGALRPGGREP EAPLPASGMRLQPPAGEVALGAQG ASPPCAFNFLLWNLSIQAQLRRVRG QGCSWRWLVLAQAIEELLGDPALV PTRRQPVGRAAPAPAASSLCCADPA GREVTQVVVVQVVVNSSS  |
| 5330  | 10827                                   | A   | 5653                                | 3                                   | 997   |   |
| 5331<br>5332                                | 10828                                   | A   | 5654<br>5655                        | 3                                   | 131   |   |
| 5333  | 10829                                   |     |                                     | 112                                 | 289   | I DDI CDAMACIFANCIECI KAMAM D   |
|   | 10830                                   | A   | 5656                                | 35                                  | 5228  | LDPLGRMVMGIFANCIFCLKVKYLP QQQKKKLQTDIKENGGKFSFSLNPQ CTHIILDNADVLSQYQLNSIQKNHV HIANPDFIWKSIREKRLLDVKNYDP YKPLDITPPPDQKASSSEVKTEGLCP DSATEEEDTVELTEFGMQNVEIPHL PQDFEVAKYNTLEKVGMEGGQEA VVVELQCSRDSRDCPFLISSHFLLDD GMETRRGFAIKKTSEDASEYFENYI EELKKQGFLLREHFTPEATQLASEQ LQALLLEEVMNSSTLSQEVSDLVE MIWAEALGHLEHMLLKPVNRISLN DVSKAEGILLLVKAALKNGETAEQ LQKMMTEFYRLIPHKGTMPKEVNL GLLAKKADLCQLIRDMVNVCETNL SKPNPPSLAKYRALRCKIEHVEQNT EEFLRVRKEVLQNHHSKSPVDVLQI FRVGRVNETTEFLSKLGNVRPLLHG SPVQNIVGILCRGLLLPKVVEDRGV QRTDVGNLGSGIYFSDSLSTSIKYSH PGETDGTRLLLICDVALGKCMDLH EKDFSLTEAPPGYDSVHGVSQTASV TTDFEDDEFVVYKTNQVKMKYIIKF SMPGDQIKDFHPSDHTELEEYRPEF SNFSKVEDYQLPDAKTSSTKAGLQ DASGNLVPLEDVHIKGRIIDTVAQVI VFQTYTNKSHVPIEAKYIFPLDDKA AVCGFEAFINGKHIVGEIKEKEEAQ QEYLEAVTQGHGAYLMSQDAPDVF TVSVGNLPPKAKVLIKITYITELSILG TVGVFFMPATVAPWQQDKALNEN LQDTVEKICIKEIGTKQSFSLTMSIE MPYVIEFIFSDTHELKQKRTDCKAVI STMEGSSLDSSGFSLHIGLSAAYLPR MWVEKHPEKESEACMLVFQPDLD VDLPDLANESEVIICLDCSSSMEGVT FLQAKEIALHALSLVGEKQKVNIIQF GTGYKELFSYPKHITSNTAAAEFIM SATPTMGNTDFWKTLRYLSLLYPA RGSRNILLVSDGHLQDESLTLQLVK RSRPHTRL\FACGIGSTANRHVLRIL SQCGAGVFEYFNAKSKHSWRKQIE DQMTRLCSPSCHSVSVKWQQLNPD APEALQAPAQVPSLFRNDRLLVYGF IPHCTQATLCALIQEKEFCTMVSTTE |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide | location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|---|---|
|   |   |   | }                                   | sequence                                  | peptide<br>sequence                                 |   |
|   |   |   |                                     |   |   | LQKTTGTMIHKLAARALIRDYEDGI LHENETSHEMKKQTLKSLIIKLSKE NSLITQFTSFVAVEKRDENESPFPDI PKVSELIAKEDVDFLPYMSWQGEP QEAVRNQSLLASSEWPELRLSKRK HRKIPFSKRKMELSQPEVSEDFEED ALGVLPAFTSNLERGRVEKLLDLS WTESCKPTATEPLFKKVSPWETSTS SFFPILAPAVGSYLTPTTRAHSPASL SFASYRQVASFGSAAPPRQFDASQF SQGPVPGTCADWIPQSASCPTGPPQ NPPSAPYCGIVFSGSSLSSAQSAPLQ HPGGFTTRPSAGTFPELDSPQLHFSL PTDPDPIRGFGSYHPSAYSPFHFQPS AASLTANLRLPMASALPEALCSQSR TTPVDLCLLEESVGSLEGSRCPVFAF QSSDTESDELSEVLQDSCFLQIKCDT KDDSIPCFLEVKEEDEIVCTQHWQD AVPWTELLSLQTEDGFWKLTPELG LILNLNTNGLHSFLKQKGIQSLGVK GRECLLDLIATMLVLQFIRTRLEKE GIVFKSLMKMDDPSISRNIPWAFEAI KQASEWVRRTEGQYPSICPRLELGN DWDSATKQLLGLQPISTVSPLHRVL |
| 5334  | 10831                                   | A | 5657                                | 10  | 82  | HYSQG   |
| 5335  | 10832                                   | С | 5658                                | 189                                       | 396   | MVHPAGPLASQXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX   |
| 5336  | 10833                                   | С | 5659                                | 54  | 485   | MXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  |
| 5337  | 10834                                   | Α | 5660                                | 5   | 417   |   |
| 5338  | 10835                                   | A | 5661                                | 3   | 398   |   |
| 5339  | 10836                                   | С | 5662                                | 12  | 451   | MXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  |
| 5340  | 10837                                   | A | 5663                                | 3   | 679   | AWWNSETPAQLLFLLLWLPYTSG EIVLTQAPGTLSLSPGERATLSCRAS QTIGSTYLAWYQQRPGQAPRFLIYG ASSRATGIPDSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSSS   |
| 5341  | 10838                                   | В | 5664                                | 94  | 321   | XDRVTITCQATQDIGNYLNWYQHK<br>PGKAPNLLIYDASNLETGVPSRFSG<br>RGSGTHFTFTISSLQPEDIATYYCQQ   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
| 5342  | 10839                                   | A | 5665                                | 3   | 764  | AWLESISPTMRVPAQLLGLLLWIP<br>GSVADIMMTQTPLSLSVSPGQSASIS<br>CKSSQSLLHSDGKTHVYWYLQKPG<br>QSPQLLIYEVSSRFSGVPDRFSGSGS<br>GTDFTLKITRVEAEDVGVYYCQQY<br>NSYLLFTFGPGTKVDIKRTVAA\PSV<br>FIFPP\SDEQLKSG\TASVVCLL\NNFL<br>FP\RRAKVQWEGGINALQSGNSQEC<br>VTE\QDSKGSTYSL\SSTLTVSKADY<br>EKHKVYACEVTHQGLSSPVTKSFN<br>RGEC   |
| 5343  | 10840                                   | A | 5666                                | 1   | 534  | RRPRREPWKPQRSFSSSCYS/ELPDT<br>TGEIVLTQSPGTLSLSPGERATLSCR<br>ASQSVSNNYLAWYQQKPGQAPRLL<br>IYDTSSRATGIPDRFSGSASGTDFTL<br>TISRLEPEDFAVYYCQQYGSSPPMY<br>TFGQGTKLEIKRTVAAPSVFIFPPSD<br>EQLKSGTASVVCLLNNFYPREAKV<br>QW   |
| 5344  | 10841                                   | A | 5667                                | 184   | 621  | LHECISVLFPISDTTGEIVLTQSPATL SLSPGERATLSCRASQSVNNNYLA WYQQKPGQPPRLLIYDASNRITGIP ARF\SGSGSGTEFTFHHSAACSLKDF CSLFTVQQLLINWASDSPLGQGTRL GD/IKRTVAAPSVFIFPPSDE   |
| 5345  | 10842                                   | A | 5668                                | 156   | 364  |   |
| 5346  | 10843                                   | A | 5669                                | 2   | 2143   | SSDGSWWTGFQWREWRQAGRSVN SWDNPKQEVRASSKDKSRGSIQEA MRMQSSAKLLCSAWTLAYSIAVRT LSSDSEGQPPLVIHRQTGSGEDLQQ TPTDLQLRVLTIRRKTNKQKGHPHQ NPISSRRQEITKIRAELKKIETQKPFK KINESRSWFFEKINKIDRLLARLIKK KIEKNQIDAIKNDKGNITTNPTEIQT TIREYYKHLYANKLEHLEEMDKFL DIYTLPRLNQEEVESVNRPITGSEIE AIINSLPTKKSPGPDRFTAELYQRYK EELVPFLLKLFQSIEKEGILPNSFYEA SIILISKPGRDTTKKENFRPISLMNID AKILNKILANQIQQHIKKLIHHHQV GFIPGMQGWFNILKSINVIHHINRTK DKNHMIISIEAEKAFDKIQQPFMLKT LNKLGIDGTYLTYLKIIRAIYDKPTA NIILNGQKLEAFPFKTGTRQGCPLSP LLFNIVLEALARAIRQEKEIKGIQLG KEDVKLSLFADDMIVYLENPIVSAQ NLLKLISNFSEVSGYKINVQKSQAFL YTNNRQTESQIMSELPFTIASKRIKY LGIQLTRDVKDLFKENYKPLLNEIK EDTNKWKNIPCSWIGRINIVKMAIL PKTLNQKFSYWFRVNKHYIHQRTFP LKETEFNTIATLYNGASP/RTAPKST GTNGHQASGLPRF*RIAFCSALVKS KRKLYQGYLPGQTDRREEGVSWCP GGP |
| 5347  | 10844                                   | Α | 5670                                | I   | 2781   |   |
| 5348  | 10845                                   | A | 5671                                | 1   | 2988   |   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
| 5349  | 10846                                   | A | 5672                                | 1   | 3516   |   |
| 5350  | 10847                                   | A | 5673                                | 1   | 2850   |   |
| 5351  | 10848                                   | A | 5674                                | 1   | 2850   |   |
| 5352  | 10849                                   | A | 5675                                | 1   | 3087   |   |
| 5353  | 10850                                   | A | 5676                                | 1   | 3111   |   |
| 5354  | 10851                                   | A | 5677                                | 1   | 2742   |   |
| 5355  | 10852                                   | A | 5678                                | 1   | 3474   |   |
| 5356  |   | В | 5679                                |   | 3264   | MGDFNTPLSTLDRSMRQKVNKDTQ ELNSALHQADLIDIYRTLHPKSTEYT FFSAPHHTYSKTDHIVGSKALLSKC KRTEIITNCLSDHSAIKLELRIKNLTQ NRSTTWKLNNQLLNDYWAHNEMK AEIKMFFETNENKDTTYQNLWDTF KAVCRGKFIALNAHKRKQERSKIDT LTSQLKELEKQEQTHSKASRRQEIT KIRAELKEIETQKILQKINESRSWFF ERINKIDRPLARLIKKKREKNQIDAI KNDKGDITTDPTEIQNTIREYYKHL YTNKLENLEEMDKFLDTYTLPRLN QEEVESLNRPITGPEIVAIINSLPTKK SPGPDGFTAKFYQRYKEELVPFLLK LFQSIEKEGILPNSFYEASIILIPKPGR DTTKKENFRPISLMNIDAKILNKILA KRIQQHIKKLIHHDQVGFIPGMQGW FNIHKSINVIQHINRPKDKNHMIISID AEKAFDKIQQPFMLKTLNKLGIDGT YFKIISAIYDKPTANIILNGQKVEAFP LKTGTRQGCPLSPLLFNIVLEVLAR AIRQEKEIKGIQLGKEEVKLSLFADD MIVYLENPIVSAQNLLKLISNFSKVS GYKINVQKSQAFLYTNNRQTESQIM SELPFTIASKRIKYLGIQLTRDVKDL FKENYKPLLKEIKEDTNKWKNIPCS WVGRINIVKMAILPKVIYRFNAIPIK LPMTFFTELEKTTLKFIWNALITKSI LSQKNKAGGITLPDFKLYYKATVT KTAWYWYQNRDIDQWNRTEPSEIT PHIYNYLIFDKPEKNKQWGKDSLLN KWCWENWLAICRKLKLDPFLTPYT KINSRWIKDLNVRPKTIKTLEENLGI TIQDIGMGKDFMSKTPKAMATKAK IDKWDLIKLKSFCTAKQTTIRVNRQ PTKWEKIFATYSSDKGLISRIYNELK QIYKKKTNNPIKKWAKDMNRHFSK EDIYAAKKHMKKCSSSLAIREMQIK TTMRYHLTPVRMAIIKKSGNNRTW EYNILCSLVPLLCSLLWLHLTDHHL KEDRTKHLTASDNLEKTELSRWKE RALLYEHRVLRPAIDSQHSCAPRRI QGHLVCGSDLTGFMDDVAVILIDVS |
|   |   |   |                                     | <u> </u>  |  | PF*   |
| 5357  | 10854                                   | A | 5680                                | 1   | 3780   |   |
| 5358  | 10855                                   | A | 5681                                | 1   | 3290   | MGELITPLSTLDRSTRQKVNKDTQE<br>LNSALHQGDLIDIYRTLHPKSTEYTF<br>FSAPHHTYSKIDHILGSKALLSKCKR<br>TEIITNYLSDHSAIKLELRIKNLTQN<br>RSTTWKLNNLLLNDYWIHNEMKAE   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|---|---|
| ]   | '                                       |   |                                     | sequence                | peptide<br>sequence   |   |
|   |   |   |                                     |                         |   | IKMFFETNENKDTTYQNLWDAFKA VCRGKFIALNAHKRKQERSKIDTLT SQLKELEKQEQTHSKASRRQEITKIR AELKEIETQKTLQKINESRSWFFERI NKIDRPLARLIKKKREKNQIDTIKND KGDIATNPTEIQTTIREYYKHLYAN KLENLEEMDKFLDTYTLPRLNQEE VESLNRPITGAEIVAIINSLPTKKSPG PDGFTAESYQRYKEELVPFLLKLFQ SIEKEGILPNSFYEASIILIPKPGRDTT KKENFRLISLMNIDAKILNKILANRI QQHIKKLIHHDQVGFIPGMQGWFNI RKSINVIQHINRAKDKNHMIISIDAE KAFDKIQQPFMLKTLNKLGIDGTYF KIIRAIYDKPTANIIŁNGQKLEAFPLK TGTRQGCPLSPLLFNIVLEVLARAIR QEKEIKGIQSGKEEVKLSLFADDMI VYLENPIVSDQNLLKLISNFSKVSGY KINVQKSQAFLYTNNRQTESQIMSE LPFTIASKRIKYLGIQLTRDVKDLFK ENYKPLLKEIKEDTNKWKNIPCSW VGRISIVKMAILPKVIYRFSAIPIKLP MTFFTELEKTTLKFIWNQKRARIAK AILSQKNKAGGITLPDFKLYYKATV TKTARYWYQNRDIDQWNRTEPSEI TPHIYNYLIFDKPEKNKQWGKDSLF NKWCWENWLAICRKLKLDPFLTPY TKINSRWIKDLNIRPKTIKTLEENLG STIQDIGMGKDFMSKTPKAMATKD KIDIWDLIKLKSFCTAKETTIRVNGQ PTKWEKIFATYSSDKGLISRICNELK QIYKKKTNNPIKKWAKDMNRHFSK EDIYAAKKHMKKCSSSLAIRQMQIK TTMRYHLTP/VKFRSTSHQSP*REAR GPGPLANAGSPGLRQIPETCHLKHP LGMLLLSHHSALSATHNPTPCKLQS SVMFTTSAAMLSDPWGLRKGLGRE MFSCKTTEGNQLEAGAAEQSLYAL   |
| 5359  | 10856                                   | A | 5682                                | 1                       | 3780  | PKPSDLQT  |
| 5360  | 10857                                   | A | 5683                                | 1                       | 2877  |   |
| 5361  | 10858                                   | Α | 5684                                | 1                       | 3126  |   |
| 5362  | 10859                                   | A | 5685                                | 3                       | 3244  | COOK LYDING A DAY LOVE TO THE COOK LAND A DAY LOVE TO THE |
| 5363  | 10860                                   | Α | 5686                                | 1540                    | 3288  | SSGLHPWDARLVQYTQINKCNPAY KQSQRQKPHYYQLEAFPLKTGTRQ QPFMLKT/LYSIVLEVLARAIRQKKE IKGIQLGKEEVKLSLFADDMIVYLE NPIVSAQNLLKLISNFSKVSGYKINV QKSQAFLYTKNRQTESQIMSELPFTI ASKRIKYLGIQLTRDVKDLFKENYK PLLKEIKEDTNKWKNIPCSWVGRIN IVKMAILPKVIYRFNAIPIKLPMTFFT ELEKTTLKFIWNQKRARIAKSILSQK NKVGGITLPDFKLYYKATVTKTAW YWYQNRVIDQWNRKEPSEITPHTY NYLIFDKPEKNKQWGKDSLFNKWC WENWLAICRKLKLDPFLTPYTKINS RWIKDLNVRPKTIKTLEENLGITIQD   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ·ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   |  | IGMGKDFMSKTPKAMATKAKIDK WDLIKLKSFCTAKETTIRVNRQPTT WEKIFTTYSSDKGLISRIYNELKQIY KKKTNNPIKKWVKDMNRHFSKEDI YAAKKHMKKCSSSLAIREMQIKTT MRYHLTPVRMAIIKKSGNNRCWRG CGEIGTLLHCWWDCKLVQPLWKSV WRFLRDLELEIPFDPAIPLLGIYPND YKSCCYKDTCT  |
| 5364  | 10861                                   | A | 5687                                | 1182  | 3406   | YQSLAETQPKKENFRPISLMNIDAKI LNKILAKRIQQHIKKLIHHDQVGFIP GMQGWFNIRKSINVTQHINRAKDK NHMIISIDAEKAFDKIQQPFMLKTLN KLGIDGTYFKIIRAIYDNPTANIILNG QKLEAFPLKTGTRQGCPLSPLLFNIV LEVLARAIRQEKEIKGIQLGKEEVK LSLFADNMIVYLENPIVSAQNLLKLI SNFSKVSGYKINVQKSQAFLYTNNR QTESQIMSQLPFTIASKRIKYLGIQLT RDVKDLFKENYKPLLKEIKEDTNK WKNIPCSG\EGRINIVKMAILP/KELE KTTLKFIWNQKRAHIAKSILNQKNK AGGITLPDFKLYYKATVTKTAWYW YQNRDIDQWNRTEPSEITQHIYSYLI FDKPEKNKQWGKDSLFNKWCWEN WLAICRKLKLDPFLTPYTKINSRWI KDLNVRPKTIKTLEENLGITIQDIGM GKDFMSKTPKAMATKDKIDKWDL VKLKSFCTAKETTIRVNRQPTKWEK IFATYSSDKGLISRIYNELKQIYKKK TNNPIKKWAKDMNRHFSKEDIYAA KKHMKKCSSSLAIREMQIKTTMRY HLTPVRMAIIKKSGNNRCWRGCGE TGTLLHCWWDCKLAQPLWKSVWR FLRDLELEIPFDPAIPLLGIYPNDYKS CCYKDTCTRMFIAALFTIAKTWNQP KCPTIIDWIKKMWHIYTMEYYAAIK NDEFVSFVGTWMKLEIIILSKLSQEQ KTTHRIFSLIGGN |
| 5365  | 10862                                   | A | 5688                                | 1   | 7578   |  |
| 5366  | 10863                                   | A | 5689                                | 16775   | 19999  | KMIKGISPPIPQKYKTTIREYYKHLY ANKLENLEEMDKFLDTYTLPRLNQ EEVESLNRSITGSEIEAIINSLPTKKSP GPDGFTAEFYQRYKEELVPFLLKLF QSIEKEGILPNSFYESSSILIPKPGRDT TKKENFRPISPISLMNIDAKILNKILA KRIQQHIKKLMHHDQVGFIPGMQG WFNIRKSINVIQHINRAKDKNHMIIS IDAEKAFDKIQQPFMLKTLNKLGID GTYFKIIRAIYDKPTANIILNGQKLE AFPLKTGTRQGCPLSPLLFNIVLEVL ARAIRQEKEIKGIQLGKEEVKLSLFA DDMIVYVENPIVSAQNLLKLISNFS KVSGYKINVQKSQAFLYTNNRQTE SQIMSELPFTIASKRIKYLGIQLTRD VKDLFKENYKPLLKEIKEDTNKWK NIPCSWVGRINTVKMAILPKVIYRF NAIPIKLPMPFFTELEKTTLKFIWNQ   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | KRARIAKSILRQKNKAGGITLPDFK LYYKATVTKTAWYWYQNRDIDQW NRTEPSEITPHIYNYLIFHKPEKNKQ WGKDSLFNKWCWENWLAICRKLK LDPFLTPYTKINSRWIKDLNVRPKTI KTLEENLGITIQDIGMGKDFMSKTP KAMATKDKIDKWDLIKLKSFCTAK ETTITVNRQPTKWEKIFATYSSDKG LISRIYNELKQIYKKKTNNPIKKWA RDMNRHFSKEDIYAAKKHMKKCSS SLAIREMQIKTTMRYHLTPVRMAII KKSGNNRSWYFEKINKIDRLLARLI KKKREKNQIDAIKNDKGDITTDPTEI QTTTREYYKHLYANKLENLEEMDK FLDTYNLPRLKQEEVESLNRPIRGSE IVAIINSLPTKKSPGPDGFTAEFYHR YKEELVPLLLKLFQSIEKEVILPNSF YEASIILIPKPDRDTAKKENFRPISLM NIDAKILNKILANRIQQHIKKLIHHD QVGFIPGMQGWFNIRKSVNVIQHIN RTKDKNHMIISIDAEKSFDKIQQHF MLKTLNKLGIDGSYLKIIRATYDKP TANIILNGQKLEAFPLKTGTRHGCP LSPLLFNIVLEVLARAIRQEKEIKGIQ LGKEEVKLSLFIDDMIVYLENPIISA QNLLKLISNFSSLRIQNQCTKITSILV HQ |
| 5367  | 10864                                   | A | 5690                                | 78                      | 308  | no  |
| 5368  | 10865                                   | A | 5691                                | 1                       | 611  | GASLGGFLAQKFAEYTHKSPRVHSL ILCNSFSDTSIFNQTWTANSFWLMP AFMLKKIVLGNFSSGPVDPMMADA IDFMVDRLESLGQSELASRLTLNCQ NSYVEPHKIRDIPVTIM\DVFDQSAL STEAKEEMVQA\YPNA\RRAHLKTG GNFPYLCRSAEGN\LMVQIHLLQFH GTKYAAIDPSMVSAEELEVQKGSL GISQEEQ  |
| 5369  | 10866                                   | A | 5692                                | 3                       | 301  |   |
| 5370<br>5371                                | 10867<br>10868                          | A | 5693                                | 75                      | 361  |   |
| 5372  | 10869                                   | A | 5694<br>5695                        | 1                       | 356<br>583   | SPLAAKSPPSLHLLE/AFKNITSSSPE<br>RHIFGEDRVVSEQPQVGTLEERNDV<br>VEALTGSAASRLRGGTSSRRLSSTP<br>LPKAKRSLESEMYLEGLGRSHIASP<br>SPCPDRMPLPSPTESRHSSSIPP\VSSP<br>PEQKVGLYRRQTELQDKSEFSDVD<br>KLAFKDNEEFESSFECVDQKQIEEQ<br>KEEEKIREQQVKERRQR  |
| 5373  | 10870                                   | A |                                     | 306                     | 4412   | RLMMAQSNMFTVADVLSQDELRK KLYQTFKDRGILDTLKTQLRNQLIH ELMHPVLSGELQPRSISVEGSSLLIG ASNSLVADHLQRCGYEYSLSVFFPE SGLAKEKVFTMQDLLQLIKINPTSSL YKSLVSGSDKENQKGFLMHFLKEL AEYHQAKESCNMETQTSSTFNRDS LAEKLQLIDDQFADAYPQRIKFESL EIKLNEYKREIEEQLRAEMCQKLKF FKDTEIAKIKMEAKKKYEKELTMF  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|--|
|   |   |   |                                     |   | sequence   | QNDFEKACQAKSEALVLREKSTLE RIHKHQEIETKEIYAQRQLLLKDMD LLRGREAELKQRVEAFELNQKLQE EKHKSITEALRRQEQNIKSFEETYDR KLKNELLNFHRLHGVCLALGILI*L WQVLEFGGSSPQECFYFLLEPKGQL VTAGKGK*NCENVPFGIANPDIMLL AVGSQDCA*SLSTKVLTLVGGGQM VQVDWK*PSDYHLGLSLLCAV*I*F TPLLFVSVETN*KVIAFSK*PYDNTT LHFV*LSFGTQFIGSRKGFTGHFMFR GYIPGFSIEDFEVYKLSCLAPSGAPV P*ISSCTDNSLSRKMPEELIFSHSDS\ RYQLELKDDYIIRTNRLIEDERKNK EKAVHLQEELIAINSKKEELNQSVN RVKELELELESVKAQSLAITKQNHM LNEKVKEMSDYSLLKEEKLELLAQ NKLLKQQLEESRNENLRLLNRLAQP APELAVFQKELRKAEKAIVVEHEEF ESCRQALHKQLQDEIEHSAQLKAQI LGYKASVKSLTTQVADLKLQLKQT QTALENEVYCNPKQSVIDRSVNGLI NGNVVPCNGEISGDFLNNPFKQENV LARMVASRITNYPTAWVEGSSPDS DLEFVANTKARVKELQQEAERLEK AFRSYHRRVIKNSAKSPLAAKSPPS LHLLEAFKNITSSSPERHIFGEDRVV SEQPQVGTLKEERNDVVEALTGSE ASRLRGGTSSRRLSSTPLPKAKRS\L ECEMYLEGLGRSHIASPSPCPDRMP LPSPTESRHSLSIPPVSSPPEQKVGLY RRQTELQDKSEFSDVDKLAFKDNE EFESSFEFNSFNYENTLTSKYVAKW LCWELHRILLGKGAPSYFGFSSRAP VSCPHTALPFFVLVLLLRTHGTIVPH AAAGNMPRQLEMGGLSPAGDMSH VDAAAAAVPLSYQHPSVDQKQIEE QKEEEKIREQQVKERRQEERRQSN LQEVLERERRELEKLYQERKMIEES LKIKKKELEMENELEMSNQEIKDK SAHSENPLEKYMKIIQQEQDQESAD KVPVWAGQSVGGGHPGLPWLNFL GRESVFSIEDKKSSKKMVQEGSLVD TLQSSDKVERHCIDPLWRTQQQGTI LEAETGPSPDIEPASAFLDLRLPSL |
| 5374  | 10871                                   | A | 5697                                | 3   | 721  |  |
| 5375  | 10872                                   | A | 5698                                | 3   | 265  |  |
| 5376  | 10873                                   | A | 5699                                | 2   | 216  |  |
| 5377  | 10874                                   | A | 5700                                | 3   | 268  |  |
| 5378  | 10875                                   | A | 5701                                | 2   | 465  |  |
| 5379  | 10876                                   | A | 5702                                | 1   | 196  |  |
| 5380  | 10877                                   | A | 5703                                | 2   | 213  |  |
| 5381  | 10878                                   | A | 5704                                | 1   | 438  | LQTWGPKQVC/SFFRRGGFEERVLL<br>KNIRENGITGALLPCLDESRFENLGV<br>SSLGERKKLLSYIQRLVQIHVDTMK\<br>VGYLAGCLVHALGEKQPELQISERD<br>VLCVQIAGLCHDLGHGPFSHMFDG<br>RFIPLARPEVKWTVCIHTVNSQ   |

| SEQ ID             | SEQ ID              |               | SEQ ID NO:            |                         |                  | Amino acid sequence ( X=Unknown; *=Stop                |
|--------------------|---------------------|---------------|-----------------------|-------------------------|------------------|--|
| NO: of nucleo-tide | NO: of              | tho           | in USSN<br>09/770,160 | location of first codon | location of last | codon; /=possible nucleotide deletion; \=possible      |
| sequence           | peptide<br>sequence | ď             | 09///0,160            | for peptide             | codon for last   | nucleotide insertion)                                  |
|                    |                     | 1             | ĺ                     | sequence                | peptide          |  |
| 5382               | 10879               | $\frac{1}{A}$ | 5705                  | 2                       | sequence<br>1925 |  |
| 5383               | 10880               | A             | 5706                  | 330                     | 590              |  |
| 5384               | 10881               | A             | 5707                  | 3                       | 139              |  |
| 5385               | 10882               | A             | 5708                  | 2                       | 126              |  |
| 5386               | 10883               | A             | 5709                  | 1                       | 157              |  |
| 5387               | 10884               | A             | 5710                  | 85                      | 489              | EKPLRWDSHLSCMLCWQAGFEAEQ                               |
|                    |                     | 1             |                       |                         | 1.05             | KVSGSSRKLAISHALLEMLTPPPAG                              |
|                    | ļ                   | ł             | i                     | Ì                       | [                | AMIPPPPSLPGPPRPGMMP\APHMG                              |
|                    | l                   |               |                       | 1                       | ĺ                | GPPMMPMMGPPPPGMMPVGPAPG                                |
|                    |                     |               |                       |                         |                  | MRPPMGGHMPMMPGPPVTRPPARP                               |
|                    |                     | _             |                       |                         | Į.               | MMVPTRPGMTRPDR   |
| 5388               | 10885               | A             | 5711                  | 235                     | 874              | VVRRSGFLFCLFVLFLSSMNSASVD                              |
|                    | 1                   | 1 '           |                       |                         |                  | GHLSGCRLFLFLSPLFRFYCDYCDT/                             |
| ļ                  |                     |               |                       | ļ                       | ]                | YLSPHDSPSVRQTHCSGK\KHIENV                              |
|                    | [                   | [ '           | •                     |                         |                  | KDYYQK\WMEK\QSQSLI\DKTTA\A                             |
|                    | ]                   |               |                       | )                       |                  | FQQGKIPPTPFSAPPP\AGA\MIPPPPK                           |
|                    | ĺ                   |               |                       | 1                       |                  | /SFPGPPSPLV*MPKHPHMGGPFPW                              |
| }                  | Ì                   |               |                       | }                       |                  | M\PMMGPSFLLGDGWPVG\PASGEL                              |
|                    | ļ                   |               |                       |                         |                  | RP\PMG\GHYCQLIAWGPPMDVGPS                              |
| 5389               | 10886               | A             | 5712                  | 2                       | 406              | CPFH*WCPLGPGMTRPDR                                     |
| 3369               | 10000               | A             | 3/12                  | 4                       | 406              | FRSPADPPVHCDKE*VLEVQREDED YHDSAKEKDEEDDSITRLLE\FELEA   |
| 1                  | }                   |               |                       |                         |                  |  |
|                    |                     |               |                       |                         |                  | YSLSHNDYDGIKKLLQQLFLKAPVN   TAELTNFLIQQNHIGSVIKHTDVS*D |
| -                  | 1                   |               |                       | 1                       |                  | SIDDMDEDEAFGFISLLNLPDRKGT                              |
|                    | Ì                   |               |                       |                         |                  | QCGEQIQE   |
| 5390               | 10887               | A             | 5713                  | 3                       | 379              | AVERGVPHPFDSPVQRDEEEEKEVD                              |
|                    |                     |               |                       |                         |                  | TEDDDDDDDDDQEKDDEDNALDEEV                              |
| į į                |                     |               |                       |                         |                  | NIEF\EAYSLSYNDYDGIKKLLPQLFI                            |
| j                  | }                   |               |                       | Ì                       |                  | AAPVNTAKLPDLLIQQNHIGSAIKQ                              |
|                    |                     |               |                       |                         |                  | TDVSEDSNDDMDEEEASYSIDRLYN                              |
| 5391               | 10888               | В             | 5714                  | 65                      | 188              | MWGFRIPADALIQRDEEEEKEVLNE                              |
|                    | 1000                | 1             |                       |                         |                  | DEDDDDSDKEKDEEDRX*                                     |
| 5392               | 10889               | A             | 5715                  | 3                       | 365              |  |
| 5393               | 10890               | A             | 5716                  | 3                       | 356              |  |
| 5394               | 10891               |               | 5717                  | 1                       | 168              |  |
| 5395               | 10892<br>10893      | A             | 5718<br>5719          | 281                     | 422              |  |
| 5397               | 10893               | A             | 5720                  | 3                       | 107<br>291       |  |
| 5398               | 10895               | $\frac{A}{A}$ | 5721                  | 1                       | 1260             | WRTAAFWAFTVFLGDIILLTDVVIH                              |
| 3370               | 10075               |               | 3721                  | 1                       | 1200             | EDQWIGETVLQSTFSSQLLNLGSYS                              |
| ]                  |                     |               |                       |                         |                  | SIQPEEYSSVVCEVVLQDLLAYVSS                              |
|                    |                     | 1 1           |                       |                         |                  | KHSYLRDLPPRQPQRVNSIDFV\EL\                             |
| }                  |                     | 1 1           |                       |                         |                  | EHLQPDVLVHGSTKELLDFTILTEG                              |
| 1                  |                     |               |                       |                         |                  | S/VYSYRGQKQ\KKVMLTV\DQAQG                              |
| ] .                |                     |               |                       |                         |                  | QHYALVLWGSWGQPGYPQLQRKK                                |
| [ [                |                     |               |                       |                         |                  | GYIWEFKYLFVQCNYTLENLELHTT                              |
|                    |                     |               |                       |                         |                  | PWSSCECLFDDDIRAITFKAKFQKS                              |
|                    |                     |               |                       |                         |                  | APSFVKISDLATHLEDKCSGVVLIK                              |
|                    |                     |               |                       | ,                       |                  | AQISELAFPITASQKIALNAHSSLKSI                            |
|                    |                     |               |                       |                         |                  | FSSLPNIVYTGCAKCGLELETDENRI                             |
|                    |                     | 1 1           | ı                     | }                       |                  | YKQCFSCLPFTMKKIYYRPALMTAI                              |
|                    |                     |               | 1                     |                         |                  | DGRHDVCIRVESKLIEKILLNISADC                             |
|                    |                     | 1 1           |                       |                         |                  | LNRVIVPSSEITYGMVVADLFHSLL                              |
|                    |                     |               |                       |                         |                  | AVSAEPCVLKIQSLFVLDENSYPLQ                              |
|                    |                     |               |                       |                         |                  | QDFSLLDFYPDIVKHGANARL                                  |
| 5399               | 10896               | A             | 5722                  | 122                     | 390              | TFCVRSGLLDFAFPEPWRWGEKWK                               |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|-------------------------|--|--|
|   |   |   |                                     |                         |  | NWPESLEVWVLVLAVPLTHCDLGI<br>LCCEDISQVLHVSQQI*PTRPGKR*L<br>LGCAEVVLSSSASPG  |
| 5400  | 10897                                   | A | 5723                                | 605                     | 902  |  |
| 5401  | 10898                                   | A | 5724                                | 116                     | 470  |  |
| 5402<br>5403                                | 10899                                   | A | 5725<br>5726                        | 1 10996                 | 9786<br>13825  |  |
|   |   |   |                                     |                         | -  | MLTLRTRRSDGKMKSGFILGLSRAR SSFPMTKKRATPGHCRDPLEGHLRF LKNIILPVYDKSLWDFLKLDVTTSIG RRQHLRVSTAFVYTKNPNGYSFSIP VKVLADKFITPGLKLNDLNSVLVM PTFHVPFTDLQVPSCKLDFREIQIYK KLRTSSFALNLPTLPEVKFPEVDVLT KYSQPEDSLIPFFEITVPESQLTVSQF T\LPKSVSDGIAALDLNAVANKIADF ELPTIIVPEQTIEIPSIKFSVPAGIVIPS FQALTARFEVDSPVYNATWSASLK NKADYVETSLDSTCSSTVQFLEYEL NVLGTHKIEDGTLASKTKGTLAHR DFSAEYEEDGKFEGLQEWEGKAHL NIKSPAFTDLHLRYQKDKKGISTSA ASPAVGTVGMDMDEDDDFSKWNF YYSPQSSPDKKLTIFKTELRVRESDE ETQIKVNWEEEAASGLLTSLKDNVP KATGVLYDYVNKYHWEHTGLTLR EVSSKLRRNLQNNAEWVYQGAIRQ IDDIDVRFQKAASGTTGTYQEWKD KAQNLYQELLTQEGQASFQGLKDN VFDGLVRVTQKFHMKVKHLIDSLID FLNFPRFQFPGKPGIYTREELCTMFI REVGTVLSQVYSKVHNGSEILFSYF QDLVITLPFELRKHKLIDVISMYREL LKDLSKEAQEVFKAIQSLKTTEVLR NLQDLLQFIFQLIEDNIKQLKEMKFT YLINYIQDEINTIFNDYIPYVFKLLKE NLCLNLHKFNEFIQNELQEASQELQ QIHQYIMALREEYFDPSIVGWTVKY YELEEKIVSLIKNLLVALKDFHSEYI VSASNFTSQLSSQVEQFLHRNIQEY LSILTDPDGKGKEKIAELSATAQEII KSQAIATKKIISDYHQQFRYKLQDF SDQLSDYYEKFIAESKRLIDLSIQNY HTFLIYITELLKKLQSTTVMNPYMK LAPGELTIIL |
| 5404  | 10901                                   | A | 5727                                | 3                       | 182  |  |
| 5405  | 10902                                   | A | 5728                                | 2                       | 221  |  |
| 5406  | 10903                                   | A | 5729                                | 577                     | 722  |  |
| 5407  | 10904                                   | A | 5730<br>5731                        | 1                       | 176<br>496   | LLGVAPSRAFQEEILR/DRASFHE/RP<br>NLFALKHPTSKAECTAEKCYRVTK<br>GRGIFPSGSPFKSVTLEDGKTFIPGQ<br>GNNAYVFPGVALGVIAGGIRHIPDEI<br>FLLTAEQIAQEVFEQHLSQGRLYPP<br>LSTIRDVSLRIAIKVLDYAYKHNLDS<br>YTWPKEAMNVQTV  |
| 5409  | 10906                                   | Ā | 5732                                | 228                     | 448  |  |
| 5410  | 10907                                   | A | 5733                                | 3                       | 1877   | EGEDRGLPRTMGAALGTGTRLAPW   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 |    | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|----|--|--|
|   |   |   |                                     |    | ·  | PGRACGALPRWTPTAPAQGCHSKP GPARPVPLKKRGYDVTRNPHLNKG MAFTLEERLQLGIHGLIPPCFLSQDV QLLRIMRYYERQQSDLDKYIILMTL QDRNEKLFYRVLTSDVEKFMPIVYT PTVGLACQHYGLTFRRPRGLFITIHD KGHLATMLNSWPEDNIKAVVVTDG ERILGLGDLGCYGMGIPVGKLALYT ACGGVNPQQCLPVLLDVGTNNEEL LRDPLYIGLKHQRVHGKAYDDLLD EFMQAVTDKFGINCLIQFEDFANAN AFRLLNKYRNKYCMFNDDIQGTAS VAVAGILAALRITNNKLSNHVFVFQ GAGEAAMGIAHLLVMALEKEGVPK AEATRKIWMVDSKGLIVKGRSHLN HEKEMFAQD\HPESNSLDEVVRLVK PTAIIGVAAIAEA\FTEQILRNMASF\ RRAPIIFALSNPPRKAECTA\EKCYR VTEGPRGFFASG\SPF*GVLIWEMGK TFIPGGRGNNA\YVFPG\VATG\VIA\ GGIRHIP\DEIFLLDSRAKLPQEVSEQ HL\SQGRLYPPLSTIRDVSLRIAIKVL DYAYKHNLV\SYYPEPKDKEAFCKI PGSYTPDYDSFYT/VDSYIWAQGKA MNVQTV |
| 5411  | 10908                                   | A | 5734                                | 14 | 304  | 1444 4 4 1 4   |
| 5412  | 10909                                   | A | 5735                                | 3  | 413  |  |
| 5413  | 10910                                   | A | 5736                                | 2  | 328  |  |
| 5414  | 10911                                   | A | 5737                                | 3  | 472  | VTEFAKTCVADESAENCDKSLHTLF<br>GDKLCTVATLRETYGEMADCCAK<br>QEPERNECFLQHKDDNPNLPRLVRP<br>EVDVMCTAFHDNEETFLKKYLYEI<br>ARRHPYFYAPELLFFAK/RLDELRD<br>EGKASSAKQRLKCASLQKFGERAF<br>KA\VARLSQRFP   |
| 5415  | 10912                                   | A | 5738                                | 1  | 2975   | MKWVTFISLLFLFSSAYSRGVFRRT PLGPASSLPQSFLLKCLEQVRKIQGD GAALQEKLCATYKLCHPEELVLLG HSLGIPWAPLSSCPSQALQLAGCLS QLHSGLFLYQGLLQALEGISPELGPT LDTLQLDVADFATTIWQQMEELGM APALQPTQGAMPAFASAFQRRAGG VLVASHLQSFLEVSYRVLRHLAQPG GGGDAHKSEVAHRFKDLGEENFKA LVLIAFAQYLQQCPFEDHVKLVNEV TEFAKTCVADESA*/ENCDKSLHTLF GDKLCTVATLRETYGEMADCCAK QEPERNECFLQHKDDNPNLPRLVRP EVDVMCTAFHDNEETFLKKYLYEI AR\RHPTCIAP\ELLFFAK\RYKAAFT\ ECCQAADKAACL\LPKLDEL\RDEG KASSAKQRLKCASLQKFGRKSFSK HGAVARL\SQEVFPKLEFCQEVSQV *WTGL*PKFPHGNC\CHGRSCFECC WMDR/RRDLWPKYILWKIQDFDLP S*TGRDCC\EKPLVWGKIPTCICRK WEN*WRLPGLDFAFH*ACLIFVWK VKGCFGQNYCLRAKDVFPGACFLY   |

| SEQ ID             | SEQ ID         |               | SEQ ID NO:            | Nucleotide              |                  | Amino acid sequence ( X=Unknown; *=Stop  |
|--------------------|----------------|---------------|-----------------------|-------------------------|------------------|--|
| NO: of nucleo-tide | NO: of peptide | tho           | in USSN<br>09/770,160 | location of first codon | location of last | codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
| sequence           | sequence       | ١             | 02///0,100            |                         | amino acid of    | nucleotide fiser fiori)  |
|                    |                |               | ļ                     | sequence                | peptide          |  |
|                    | ļ              | <del></del>   | ļ                     | <u> </u>                | sequence         | LDIVID A GUERRY TO THE TOTAL T |
| ]                  | ļ              |               | }                     | }                       | )                | \DYARRAS*FTLFVPAAEDLPRTYET   |
|                    |                |               | ĺ                     |                         |                  | TLEECCAAADPHECYAKVFDEFKPL  |
| 1                  | }              |               | }                     | 1                       | }                | VEEPQNLIKQNCELFEQLGEYKFQN  |
|                    |                | Ì             |                       | ł                       |                  | A\LLVRYT\KKVPQVSTPTLVEVSRN<br>LGKVGSKCCKHPEAKRMPCAEDYL   |
|                    | ł              | 1             | į                     | ł                       |                  | SVVLNHLCVLHEKTPVSDTVTKCC   |
| 1                  |                |               |                       | 1                       |                  | TESFVNTPPCFSALEVDETYVPKHF  |
|                    |                | [             |                       |                         |                  | NAETFTFHAHISTLSQKERQIKKQT  |
| )                  |                | 1             |                       | ļ                       |                  | ALVDLVKHKPKATKEQLKAVMDD  |
| 1                  | ĺ              |               |                       | 1                       |                  | FAAFVEKCCKADDKETCFAEEGKK   |
| l                  | }              |               |                       | 1                       |                  | LVAASQAALGLTPLGPASSLPQSFL  |
| İ                  | ļ              | 1             |                       |                         |                  | LKCLEQVRKIQGDGAALQEKLCAT   |
| 1                  |                | 1             |                       | [                       |                  | YKLCHPEELVLLGHSLGIPWAPLSS  |
| ]                  | }              |               |                       |                         |                  | CPSQALQLAGCLSQLHSGLFLYQGL  |
|                    |                |               |                       |                         |                  | LQALEGISPELGPTLDTLQLDVADF  |
| }                  | 1              | }             |                       | ł i                     |                  | ATTIWQQMEELGMAPALQPTQGA  |
|                    |                | ļ             |                       |                         |                  | MPAFASAFQRRAGGVLVASHLQSF   |
| 5416               | 10012          | -             | 5720                  | 100                     | 010              | LEVSYRVLRHLAQP   |
| 5417               | 10913<br>10914 | A             | 5739<br>5740          | 132<br>59               | 918<br>335       |  |
| 5418               | 10914          | $\frac{A}{A}$ | 5741                  | 219                     | 642              | VCWELCA ELIVIAVEN AVIII I I TAG  |
| 3-110              | 10713          |               | 3741                  | 219                     | 042              | KGWFLGAFHKL\KTMKHLLLLTMG<br>C/VF*VKSQGVNDN\EEGFFSARGHR   |
|                    | ļ              |               |                       |                         |                  | P\LDKKREEAP\SLRPAPPPISGRWAI  |
| 1                  |                | 1             |                       |                         |                  | RASSQPKQLATSKGK*ERKSPWIAG  |
|                    |                |               |                       | ]                       |                  | KVVFSRLDPDLG\VVCCSLQGCSVC  |
|                    |                |               |                       |                         |                  | QGGFFLTTRGKGPFQELVV  |
| 5419               | 10916          | A             | 5742                  | 1                       | 359              |  |
| 5420               | 10917          | A             | 5743                  | 1                       | 322              |  |
| 5421               | 10918          | A             | 5744                  | 2                       | 862              | FVDGKLHGRGSTDDKGPVAGWINA   |
| ,                  |                | 1 1           |                       |                         |                  | LEAYQKTGQEIPVNV\RFCLEGMEE  |
|                    |                |               |                       |                         |                  | SGSEGLDELIFARKDTFFKDVDYVC  |
|                    |                | 1 1           |                       |                         |                  | ISDNYWLGKKKPCITYGLRGICYFFI   |
|                    |                | 1             |                       |                         |                  | EVECSNKDLHSGVYGGSVHEAMTD<br>LILLMEEHKLYDDIDFDIEEFAKDV  |
|                    | 1              | 1 (           |                       |                         |                  | GAQILLHSHKSHLHLDLLPVVVRLL  |
| ,                  |                | 1 1           |                       |                         |                  | GQALFHTAHFPDNIPSSSKDILMHR  |
|                    |                | 1             |                       |                         |                  | WRYPSLSLHGIEGAFSGSGAKTVIP  |
| }                  |                | 1 1           |                       |                         |                  | RKVVGKFSIRLVPNMTPEVVGEQA   |
| j                  |                | ) )           |                       |                         |                  | CGAGTRESMSSLGYPSRAEDDSGLS  |
|                    |                |               |                       |                         |                  | ALPSQPQPFILYAT   |
| 5422               | 10919          | A             | 5745                  | 455                     | 601              | SLAICGSCPFLKTFTITGVFLSSL*YD  |
|                    | 1000           | 1             |                       |                         |                  | PSKPALTGRMILSQFVLLNKK  |
| 5423               | 10920          | A             | 5746                  | 25                      | 458              |  |
| 5424<br>5425       | 10921          | A             | 5747                  | 3.                      | 396              | 1004 A 100 A 21 22 22 22 22 22 22 22 22 22 22 22 22  |
| 3423               | 10922          | A             | 5748                  | 2                       | 797              | AGPAALGGAGLCRAADAGLCSAGC   |
|                    |                | 1             |                       | ł                       | }                | GFVKVVKNKAYFKRYQVKFRRR\R   |
|                    |                |               |                       | j                       |                  | KGKT\DYYARKR\LVIQDKNKYNTP<br>KYRMIV\RVTNRDIICQIAYA\RIEGD   |
| Ì                  |                |               |                       |                         | ľ                | MIVCAA*CTPNLPKYGV\KVGLTNY  |
| ,                  |                |               |                       | ļ                       |                  | AAAY\CT\GLLL\ARRL\LNRFG\MDN  |
| İ                  |                |               | ļ                     |                         |                  | \IYEGQV\EVTG\DEYNVESIDWSAQ   |
|                    |                |               |                       |                         |                  | GAF\TCY\LDAGLAR\TT\TGNKVFG\  |
| }                  |                |               |                       |                         |                  | ALKGMLWMGGLSIPHSSKRFLGLSI  |
|                    |                |               |                       |                         | [                | PHSTK*ILGYDSENKEFNAEVRRKHI   |
|                    |                | $oxed{oxed}$  |                       |                         |                  | MGQKFADDLHCLIEEDENASKK   |
| 5426               | 10923          | A             | 5749                  | 172                     | 333              |  |
| 5427               | 10924          | A             | 5750                  | 2                       | 282              | SLSREVQRQMHLVFFSKNKLKAGY   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|------------------------------------|---|
|   |   |   |                                     |   |                                    | LMSVESSE/CFLEEVG/SQALVAGSY<br>MPPSTVLQQIDS/VANADIINAAKKF<br>VS/GQKSMAAGGNLGHTPLVDEL   |
| 5428  | 10925                                   | A | 5751                                | 813   | 998                                |   |
| 5429  | 10926                                   | A | 5752                                |   | 1418                               | MKLLTRAGSFSRFYSLKVAPKVKA TAAPAGAPPQPQDLEFTKLPNGLVI ASLENYSPVSRIGLFIKAGSRYEDFS NLGTTHLLRLTSSLTTKGASSFKITR GIEAVGGKLSVTATRENMAYTVEC LRGDVDILMEFLLNVTTAPEFRRWE VADLQPQLKIDKAVAFQNPQTHVIE NLHAAAYQNALANPLYCPDYRIGK VTSEELHYFVQNHFTSARMALIGLG VSHPVLKQVAEQFLNMRGGLGLSG AKANYRGGEIREQNGDSLVHAAFV AESAVAGSAEANAFSVLQHGPRVL GHHVKSGQQQPPAHLHQ\AVAKA\T QQP\FDVSAFNASYSDS\GLFGI\YTIS QGHQLAGDCIK\AA\YNQVKTIA\QG N\LSNTDV\QAAQEPS*KAGIP*WSV ESSE\CF\LEEVRVPRALVAGSY\MPP VHSSFQQI/DSPKRGWGGAKMPDII NGGKRSFVSGPEVQWAASLENLGT LHLFV |
| 5430  | 10927                                   | A | 5753                                | 150   | 355                                | ZIIGI V   |
| 5431  | 10928                                   | A | 5754                                | 2   | 388                                | FLFFFFEMESRSVAQAGVQWCDLG<br>SLQPPPP\GLSDSPALASSVSWITDV<br>RHHLWLIFVFLVETGFRHVGQASLK<br>LPTSGDLPTLASQSAGITGVSHYAW<br>LIFVFLVETEFHHVGQAGLELLAPS<br>DPPA   |
| 5432  | 10929                                   | С | 5755                                | 197   | 415                                | MLLYVGLEPHHTHMLSLWPPRLMF<br>PSVFFFFFFFFFLRQGLALLPRLECS<br>GAILAHCNLHLLGSGDSLASAF*   |
| 5433  | 10930                                   | A | 5756                                | 764   | 1079                               | KGVLFFFFKTES\HSVAQAGV\QW<br>CTLGSLQPP/PSRGSSDSPASASRVA<br>GIRGVHHHARLIFVFLVETGFHYVG<br>QAGLELPTSGDSPASASQSAGVTGV<br>SHQCPA  |
| 5434  | 10931                                   | A | 5757                                | 213   | 383                                |   |
| 5435  | 10932                                   | A | 5758                                | 1   | 981                                |   |
| 5436  | 10933                                   | A | 5759                                | 124   | 354                                |   |
| 5437  | 10934                                   | A | 5760                                | 2   | 646                                | CGGIHGNHTFKMALNQFSDMSFAEI KHKYLWSEPQNCSATKSNYLRGTG PYPPSVDWRKKGNFVSPVKNQGAC GSCWTFSTTGALESAIAIATGKMLS LAEQQLVDCAQDFNNHGCQGGLPS QAFEYILYNKGIMGEDTYPY\QGKD GYCK\FQP\GKAIGFVKDV\ANITIYD EEAMVEAVALYNPVSFAFEVTQDF MMYRTGIYSSTSCHKTPDK   |
| 5438  | 10935                                   | A | 5761                                | 1   | 218                                |   |
| 5439  | 10936                                   | A | 5762                                | 272   | 364                                |   |
| 5440  | 10937                                   | A | 5763                                | 1   | 1956                               |   |
| 5441  | 10938                                   | A | 5764                                | 105   | 533                                |   |
| 5442  | 10939                                   | A | 5765                                | 292   | 568                                |   |
| 5443  | 10940                                   | A | 5766                                | 1   | 279                                |   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence | tho<br>d | SEQ ID NO:<br>in USSN<br>09/770,160 | location of<br>first codon<br>for peptide<br>sequence | location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|----------|-------------------------------------|---|--|--|
| 5444  | 10941                                   | A        | 5767                                | 3   | 352  |  |
| 5445  | 10942                                   | A        | 5768                                | 375   | 485  | TPGLK*FSHLDLLNCWDYRCETVH<br>LAEIAQVSEKQI   |
| 5446  | 10943                                   | A        | 5769                                | 3   | 221  |  |
| 5447  | 10944                                   | A        | 5770                                | 793   | 1039   | SFSFTFKMLSGRRETFFFGGRFFWF<br>VV\VFFFFLAGRGSFALVAQAGVQ<br>WRDLRSLQPPPRGFRRFFCLSLPGA<br>CGPRYLGG   |
| 5448  | 10945                                   | С        | 5771                                | 33  | 334  | MSDSGKSSPVAHSILWIWGRDSDA<br>YRDKQHILWPKRADCTESYPRVPA<br>GGELPTYFLPPENKGLRIHELNSDD<br>YSTEEEAQTPDCSITDFTRRHTLSYL<br>V*  |
| 5449  | 10946                                   | A        | 5772                                | 194   | 593  |  |
| 5450  | 10947                                   | A        | 5773                                | 1   | 877  |  |
| 5451  | 10948                                   | A        | 5774                                | 2   | 352  |  |
| 5452  | 10949                                   | A        | 5775                                | 3   | 726  | EQEVDYDPKEFNAETFTFHADICTL SEKERQIKKQTALVELVKHKPKAT KEQLKAVMDDFAAFVEKCCKADD EMPADLPSLAADFVESKDVCKNYA EAKDVFLGMFLYEYARRHPDYSVV LLLRLAKTYETTLEKCCAAADPHEC YAKVFDEFKPLVEEPQNLIKQNCEL FEQLGEYKFQNALLVRYTKKVPQV STPTLVEVSRNLRKVGSKCCKHPEA KRMPCAEDYLSVVLNQLCVLH/EK TPVSDRVTKCCTESLVNRRPCFSAL EVDETYVPKEFNAETFTFHADICTL SEKERQIKKQTALVELVKHKPKAT KEQLKAVMDDFAAFVEKCCKADD EMPADLPSLAADFVESKDVCKNYA EAKDVFLGMFLYEYARRHPDYSVV LLLRLAKTYETTLEKCCAAADPHEC YAKVFDEFKPLVEEPQNLIKQNCEL FEQLGEYKFQNALLVRYTKKVPQV STPTLVEVSRNLRKVGSKCCKHPEA KRMPCAEDYLSRGPEPVMCVA |
| 5453  | 10950                                   | A        | 5776                                | 4274  | 5255   | HTLFGDKLCTVATLRETYGEMADC CAKQEPERNECFLQHKDDNPNLPR LVRPEVDVMCTAFHDNGETFLKK* VIRCL*FKIKKHGVTP*ANTL*KLP* QKYFQH*DLEVLL**FFKEVVFDTT KFYTAKNMIKDILKFIETGYNLSQK FKIDKFFNVFRRYVYMVVIIDFVLV SNIILPKFNHLCTHTHTHTHLTLFST YLKNDRDKTIMCKLSLIG*L\ESLEF GGSGENVDYNYFCNIVCYRK/ADCF SFLKFRYLYEIARRHPYFYAPELLFF AKRYKAAFTECCQAADKAACLLPK VLCTRIEKKSLLSNLILSILWLDLGT LSV   |
| 5454  | 10951                                   |          | 5777                                | 15  | 218  |  |
| 5455  | 10952                                   | A        | 5778                                | 141   | 318  |  |
| 5456  | 10953                                   | A        | 5779                                | 1   | 290  | TMSLNRLQEFGTSLVTLDAPHILPE<br>GDELLEENQEGCFS*SFLFATNATL<br>GPRLWSPWLASGLSLPEACASPKH<br>AAQGPHPQKPPRLQPPQHSVCQ   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence (X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|---|-------------------------------------|---|--|---|
| 5457  | 10954                                   | A | 5780                                | 2   | 643  | GTRLFEQLGEYKFQNALLIRYTKKV PQVSTPTLVEVSRNLGKVGSKCCK HPESKKECPVQEDYLSRGSWNQLL CVCIE\KTPVKLTESPKC\CTESLG*T GRPLLFSALGKFDWKHYGFPKRSF NCLKTFHLSMAGFMAHFFEEGRRT NSRKTNWHLFELVETQGPRQQKRQ LKA\VMGGFAAFVEKCCKADDKET CFAEEGKKLVAASQAALGL   |
| 5458  | 10955                                   | A | 5781                                | 1   | 135  |   |
| 5459  | 10956                                   | A | 5782                                | 1   | 330  |   |
| 5460<br>5461                                | 10957                                   | A | 5783<br>5784                        | 247   | 434  |   |
|   |   | A | 370-4                               | 140   | 2569   | SGSPVLDPSEPQPLAAMHVIKRDGR QERVMFDKITSRIQKLCYGLNMDF VDPAQITMKVIQGLYSGVTTVELDT LAAETAATLTTKHPDYAILAARIA\V SNLHKETKKVFSDV\MEDLYNYINP HNGKHSPMVAKSTL\DIVLANKDRL NSAIIYDRDFSYNYFGFKTLERSYLL KINGKVAERPQHMLMRVSVGIHKE DIDAAIETYNLLSERWFTHASPTLFN AGTNRPQLSSCFLLSMKDDSIEGIY DTLKQCALISKSAGGIGVAVSCIRA TGSYIAGTNGNSNGLVPMLRVYNN TARYVDQGGNKRPGAFAIYLEPWH LDIFEFLDLKKNTGKEEQRARDLFF ALWIPDLFMKRVETNQDWSLMCPN ECPGLDEVWGEEFEKLYASYEKQG RVRKVVKAQQLWYAIIESQTETGTP YMLYKDSCNRKSNQQNLGTIKCSN LCTEIVEYTSKDEVAVCNLASLALN MYVTSEHTYDFKKLAEVTKVVVRN LNKIIDINYYPVPEACLSNKRHRPIGI GVQGLADAFILMRYPFESAEAQLLN KQIFETIYYGALEASCDLAKEQGPY ETYEGSPVSKGILQYDMWNVTPTD LWDWKVLKEKIAKYGIRNSLLIAP MPTASTAQILGNNESIEPYTSNIYTR RVLSGEFQIVNPHLLKDLTERGLWH EEMKNQIIACNGSIQSIPEIPDDLKQL YKTVWEISQKTVLKMAAERGAFID QSQSLNIHIAEPNYGKLTSMHFYGW KQGLKTGMYYLRTRPAANPIQFTL NKEKLKDKEKVSKEEEEKERNTAA MVCSLENRDECLMCGS |
| 5462  | 10959                                   | A | 5785                                | 1   | 161  |   |
| 5463  | 10960                                   | A | 5786                                | 2   | 170  |   |
| 5464  | 10961                                   | С | 5787                                | 219   | 398  | MSQESVILFYSVGMSLFLFLFRVVT<br>NFTFFPLAVICIRASHLLLACPLPSLS<br>LPHQPTH*  |
| 5465  | 10962                                   | A | 5788                                | 2   | 472  |   |
| 5466  | 10963                                   | A | 5789                                | 3720  | 5308   | PLLPFLSPPHLTEVEGQGRMVGTEE TWSNCSGAFKPKCSPQPQICLVLAP TRELAQQVQQVADDYGKCSRLKST CIYGGAPKGPQIRDLERGVEICISTP GRLIDFLESGKTNLSRCTYLVLDET DKMLDMGSEPQIL*IGDPIRPDRQTL  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |  | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)  |
|---|---|--|-------------------------------------|-------------------------|--|--|
|   |   |  |                                     |                         |  | MWSATWPKEVRQLAEDFLRDYTQI NVGNLELSANHNILQIVDVCMESEK DHKLIQLMEEIMAEKENKTIIFVETK RRCDDLTRRMRRDGWPAMCIHGD KSQPERDWVLNEFRSGKAPILIATD VASRGLDVEDVKFVINYDYPNSSED YVHRIGRTARSTNKGTAYTFFTPGN LKQARELIKVLEEANQAINPKLMQL VDHRGGGGGGGKGGRSRYRTTSSA NNPNLMYQDECDRRLRGVKDGGR RDSASYRDRSETDRAGYANGSGYG SPNSAFGAQAGQYTYGQGTYGAAA YGTSSYTAQEYGAGTYGASSTTSTG RSSQSSSQQFSGIGRSGQQPQPLMS QQFAQPPGATNMIGYMGQTAYQYP PPPPPPPPSRK  |
| 5467  | 10964                                   | A  | 5790                                | 1                       | 307  | ·  |
| 5468  | 10965<br>10966                          | A  | 5791<br>5792                        | 2821                    | 5781   |  |
| 5469  | 10967                                   | A  | 5793                                | 99                      | 981  | NHKDGEKTEQKNGKL*KSECLSKN KAGGITLPDFKLYYKATVTKTAWY WYQNRDIDQWNRTEPSEIMPHIYN HLIFDKPDKNKKWGNDSLFNKWC WENWLAICRKLKLDPFLTPYTKINS RWIQDLNIRPKNIKTLEEILGNTIQDI GMGKDFKSKTPKAMAIKAKIDKW DLIKLKSFCTEKETTIRVNRQPTEWE KIFAIYSSEKGLISRIYNELQQIYKKK TNNPIQKRVKDMNRHFSKEDIYAA K\KT*KNAHHHMKKCSSSPAIREIQI KTTMRYHLIPIRMVIIKKSGNKGCW RGCGEIGTVLH  |
| 5471  | 10968                                   | A  | 5794                                | 3                       | 1218   |  |
| 5472  | 10969                                   | В  | 5795                                | 1                       | 1098   | MIDKGDIITDPSEIQTTIREYYNYLY TNKLENLEEMDKFLDTYTLPRLNQ EEVESLNRPTTGSEIEAIMNSLPTKK VQDQMDSQPNSTRVLEVLARAIRQ EKEIKGIQLGKEEVKLSLFADDMIV YLENPIVSARNLLKLIGNFSKVSGY KINVQKSQAFLYTNNRQTESQIMSE LPFTIASKRIKYLGIQLKRDVKDLFK ENYKPLLKEIKEDTNKWKSIPCSWV GRINIMKMAILPKVIYRFNAIPNKLP MPFFTELEKTTLKFIWNQKRAHIAK SILSQKNKAGGITLPDFKLYYKATV TKTAWYWYQNRDIDQWNRTEPSEI MPHIYNHLIFDKPDKNKKWGKDSL FNKWCWENWQPYVES*   |
|   |   | <del>                                     </del> |                                     | 1                       | 1245   | MANAGE PARTITION OF THE |
| 5474  | 10971                                   | A  | 5797                                | 1                       | 969  | MIVYLENPIVSAQNLLKLIGNFSRVS GYKINVQKSQAFLYTNNRQTENQII SELPFTIASKRIKYLGIQLTRDVKDL FKENYKTLLKEIKEDTKKWKNIPCS WVGRINIVKIAILPKVIYRFSAIPIKL PMTFFTELEKTTLKFIWNQKRARIA KSILSQKNKAGGIMLPDFKLYYKAT VTKTAWYWYQNRDIDQWNRTEPS EIMLHIYKHLIFDKPDKNKQWGKDS  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   |  | LFNKWCWENWLAICRKLKLDPFLT PYTKINSRWIKDLNVRPKTIKTLEEN LGNTIQDIGTGKDFMSKTPKAMAT KAKIDKWDL/LRFCTAK*TTIRV  |
| 5475  | 10972                                   | В | 5798                                |   | 1383   | MGDFNTPLSTLDRSKRQKVKKDIQ ELNSALHQVDLIDIYRTPYPKSTEYT FFSAQHHTYSKTDHIVGSKELLSKC KRTEIITNCLSDHSAIKLELRIKKLTQ NRSTTWKLNNLLLNDYWVHNEMK AEIKMFFETNENKDTTYQNLRDTLK AVCRGKFVALNAHQRKQKISKIDTL TSQLKELEKQEQTHSKASRRQEITKI RAELKEIETQKTLQKINDSRSWAIR QEKEIKGIQLGKEEVQLSLFADDMI VHLENPIVSAQNLLKLIGNFSKVSG YKINVKKSQAFLYTNNRQTESQIMS EFPFTIASKRIKYLGIQLTRDVKDLF KENYKTLLNEIKEDTNKWKNIPCS WVGRINIVKMAILPKVIYRFNAISIK LPMTFFTELGKPTLKLVWNQKRVRI AKSILSQKNKAGGIMLPDFKLYYKA TVTKTAWYWYQNRDIDQWNRTEP SEIMPHITTI* |
| 5476  | 10973                                   | A | 5799                                |   | 1272   | MIISMDAEKAFDKIQQCFMLKTLNK LGIDGTYLKKIRAIYDKPTVNIILNG QKLEALPLKTGTRQGCPLSPLLFNIV LQALARAIRQEKEIKGIQLGKEEVK LSLFADDMIVYLENPIVKAQNLLKL ISNFSKVSGYKISMQKSQAFLYTNN RQIESQIMSELPFTIASKRIKYLGIQL TRDVKDLFKENYKPLLNEIKEDKN KWKNIPCSWVGRINIVKMAILPKFI WRQKRAHIAKSILSQKNKAGGIKLP DFKLYYKATVTKTAWYWYQNRDI DQWNRTEPSEIMLHIHNYLIFDKPD KNKKWRKDSLFNKWCWENWLAK CRKLKLHPFLTPYTKINSRWIKDLH VRPKTIKTLEENLGITIQDKGMGKD FMSKTPEALATKANIDKSDLIKLKS SCKVETTIRVNRQPTEWEKIFAIYSS  |
| 5477  | 10974                                   | A | 5800                                | 1   | 1398   |   |
| 5478  | 10975                                   | A | 5801                                | 564   | 2444   | LTNQKKSRTRWIHSRILPEVQGGAV LEVLARAIRQEK\EVKGIQLGKEEV KLSLFADDMIVYLENPIISAQNLLKL IGNFSKVSGYKINVQKSQAFLYTNN RETESQIMSELPFTTASKRIKYLGIQ LTRDVKELFKETYNPLLNEIKEDTT KWKNIPCSWVGRINIVKIAILPKVICI FNAIPIKLPMTFFTELEKTTLKFIRNQ KRARIAKSILSQKNKAGDVTLPDFK LYYKATVTKTVWYWYQNRDIDQW NRTEPSEIILHIYNHLIFDTPDKNKK WGKDSLFNKLCWENWLAICRKLKL DPFFTPYTKINSRWIKDLHVRPKTIK TLEENLGNTIQDIGIGKDFMTKTQK AMATNAEIHKWDLIKLKHFCTAKE TTIRVNRQPTKWENIFAIYSSDKRLI SRIYKELKHIYKRKTNNPINKWAKD                                  |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | location of first codon | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide<br>sequence | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|-------------------------|--|---|
|   |   |   |                                     |                         |  | MNRHFSKEDIYAANRHMKKCSSSL<br>AIREMQIKTTMRYHLTPVRMAIIKK<br>SGNNRCWRGCGENHSQQTITRTKIQ<br>TLHVLNHRWELNNENTWTQEGEH<br>HTLGPVVGWGRGEGQQCISPYSMG<br>KASIPHAVLWVFFGLCQNAPNLDW<br>SLVSLWWCLLGFTNFFCKEPDCKY<br>VRLFRPLGIVFATPPLPPPPPPSSSTS<br>S   |
| 5479  | 10976                                   | A | 5802                                | 1                       | 2430   |   |
| 5480  | 10977                                   | A | 5803                                | 2022                    | 4573   |   |
| 5481  | 10978                                   | A | 5804                                | 1169                    | 3077   | VHCRFWILALCQMSRLQKSPLLFNI VLEVLAKAIKQEKEIKGIQLGKEEV KLSLFADDMIVYLENPIVSAQNLLIL QLISNFSKVSGYKINVQKSQAFLYT NNRQTESQMRSELPFTVATKRIKYL GIQLTRDVKDLFKENYKLLLNEIKE DTNKWKNIPRSWVGGRINLVKMAI LPKVIYRFNAIPIKLPMTFFTELEKTT LKFIWNQKRALIAKSSLSQKNKTGG ITLPDFKLYYKATVTKTSWYWYQN RDIDQWNRTEPSEIMPHIYNYLIFDK PDKNKK\WGKDSLFNKWFWENCL AICRKLKLDPFL\TNYTKINSRWIKD LNFRPKTIKTLEDNLGNTIQDIGMG KDFMSLP/KTPEAMATKAKIDKWD LIK\LKSFCTAKETTIRVNRQPTKWE KIFAIYSSDKGLISRIYNELKQIYKK K\TNNPIKKWAKDTNRHFSKEDIYA ANRHMRKCSSSLVIREMQIKTTMR YHLTPVRTAIIKKSGDNRCWRGCGE IGTLLHCWWDCKLVQPLWKSVWR FLRDLELEIPFDPAIPLLGIYPKDYKS CCYKDTCTCMFIAALFTIAKTWNQP KCPTMIDWIKKMWHIYTMEYYAAI KNDEFVSFVGTWMKLEIIILSKLSQE QKTKHCIFSLIGGN |
| 5482  | 10979                                   | A | 5806                                | 133                     | 358  | QKTKHCH BEIGGIN   |
| 5483  | 10980                                   | A | 5807                                | 3                       | 164  |   |
| 5484  | 10981                                   | A | 5808                                | 1573                    | 1720   | †   |
| 5485  | 10982                                   | A | 5809                                | 1573                    | 1720   |   |
| 5486  | 10983                                   | A | 5810                                | 1                       | 4860   |   |
| 5487  | 10984                                   | A | 5811                                | 2                       | 2887   | VRVIKSEDDVLVVCPTILTEDGMQA QHLGATLALYRLVKGQSVHQLLPP TYRDVWLEWSDAEKKREELNKME TNKPRDLFIAKLLNKLKQQQQQQ QHSENKRENSEDPEESWENLVSDE DFSALSLESANVEDLEPVRNLFRKL QSTPKYQKLLKERQQLPVFKHRDSI VETLKRHRVVVVAGETGSGKSTQV PHFLLEDLLLNEWEASKCNIVCTQP RRISAVSLANRVCDELGCENGPG'G RNSLCGYQI\RMESRACESTRLLYCT TGVFA*GKLQEDGLSK*CVSMFIVD EV\HER\SVQSDFLLIILKEILQKRSD LHLILMSATVDSEKFSTYFTHCPILR ISGRSYPVEVFHLEDIIEETGFVLEK   |

| SEQ ID<br>NO: of<br>nucleo-tide<br>sequence | SEQ ID<br>NO: of<br>peptide<br>sequence |   | SEQ ID NO:<br>in USSN<br>09/770,160 | Nucleotide<br>location of<br>first codon<br>for peptide<br>sequence | Nucleotide<br>location of last<br>codon for last<br>amino acid of<br>peptide | Amino acid sequence ( X=Unknown; *=Stop codon; /=possible nucleotide deletion; \=possible nucleotide insertion)   |
|---|---|---|-------------------------------------|---|--|---|
|   |   |   |                                     |   | sequence   | DSEYCQKFLEEEEEVTINVTSKAGGI KKYQEYIPVQTGAHADLNPFYQKY SSRTQHAILYMNPHKINLDLILELLA YLDKSPQFRNIEGAVLIFLPGLAHIQ QLYDLLSNDRRFYSERYKVIALHSI LSTQDQAAAFTLPPPGVRKIVLATNI AETGITIPDVVFVIDTGRTKENKYHE SSQMSSLVETFVSKASALQRQGRA GRVRDGFCFRMYTRERFEGFMDYS VPEILRVPLEELCLHIMKCNLGSPED FLSKALDPPQLQVISNAMNLLRKIG ACELNEPKLTPLGQHLAALPVNVKI GKMLIFGAIFGCLDPVATLAAVMTE KSPFTTPIGRKDEADLAKSALAMAD SDHLTIYNAYLGWKKARQEGGYRS EITYCRNFLNRTSLLTLEDVKQELI KLVKAAGFSSSTTSTSWEGNRASQT LSFQEIALLKAVLVAGLYDNVGKII YTKSVDVTEKLACIVETAQGKAQV HPSSVNRDLQTHGWLLYQEKIRYA RVYLRETTLITPFPVLLFGGDIEVQH RERLLSIDGWIYFQAPVKIAVIFKQL |
|   |   |   |                                     |   |  | QIITELIKTENN  |
| 5488  | 10985                                   | A | 5812                                | 1   | 132  |   |
| 5489<br>5490                                | 10986                                   | A | 5813<br>5814                        | 383<br>2444   | 2755   | DYYYFFEMESCSVAQAGVQWRDL<br>GSLQPPPP\SSRDSSASASRVAGTTG<br>MHH/HNQLSFVFLVKMGFHHVGQA<br>DFELLTSSDLPVSASQSAGITGVSHR<br>ARPLSS   |
| 5491  | 10988                                   | A | 5815                                | 1724  | 1941   | AHLLYEWIFFFFFFEMESHSVAQA<br>GVLWRDLSSLQAPPPG\SQSDSPAS<br>ASWVAGITGACHHARHEWNFKC   |
| 5492  | 10989                                   | A | 5817                                | 37  | 2496   | ASW VAGITGACIIIANIEWIYAC  |
| 5493  | 10990                                   | A | 5818                                | 2   | 1814   |   |
| 5494  | 10991                                   | A | 5819                                | ī   | 394  |   |
| 5495  | 10992                                   | A | 5820                                | 2   | 1785   | QLFACVPKTSPPATVISSVTSTCSSL PSVSSAPITSGQAPTTFLPASTSQAQ LSSQKMESFSAVPPTKEKVSTQDQP MANLCTPSSTANSCSSSASNTPGAP ETHPSSSPTPTSSNTQEEAQPSSVSD LSPMSMPFASNSEPAPLTLTSPRMV AADNQDTSNLPQLAVPAPRVSHRM QPRGSFYSMVPNATIHQDPQSIFVT NPVTLTPPQGPPAAVQLSSAVNIMN GSQMHINPANKSLPPTFGPATLFNH FSSLFDSSQVPANQGWGDGPLSSRV ATDASFTVQSAFLGNSVLGHLENM HPDNSKAPGFRPPSQR\VSTSPVGLP SIDPSG\SSPSSSSAPL\ASFSGIPGNQ GFFLQGP\APVGGLLSFNRQHF/SFP HPW\TSASNSCDSPIPSVSSGSSSPLS ATS\APPTLG\QPKGSQCQSRIRKGY LPPIGTERLARILQGGSVAQAPAG\T SFVAPVGHSG\IWSFGVNAVS\EGL\S GWSQSVMG\NHPMAFNNFSGPKAH FSQHQPMERDDSGMVAPSNIFHQP                   |

| SEQ ID      | SEQ ID       |   | SEQ ID NO: | Nucleotide |                     | Amino acid sequence (X=Unknown; *=Stop            |
|-------------|--------------|---|------------|------------|---------------------|---|
| NO: of      | NO: of       |   | in USSN    |            | location of last    | codon; /=possible nucleotide deletion; \=possible |
| nucleo-tide | peptide      | d | 09/770,160 |            | codon for last      | nucleotide insertion)                             |
| sequence    | sequence     | ļ |            |            | amino acid of       |   |
|             |              |   |            | sequence   | peptide<br>sequence |   |
| <del></del> | <del> </del> |   |            |            | sequence            | MASGFVDFSKGLPISMYGGTIIPSHP                        |
|             |              |   |            |            |                     | 1   |
| }           |              | - |            | }          |                     | QLADVPGGPLFNGLHNPDPAWNPM                          |
|             |              |   |            |            |                     | IKVIQNSTECTDAQQVKWA                               |
| 5496        | 10993        | A | 5821       | 3          | 125                 |   |
| 5497        | 10994        | A | 5822       | 3448       | 3831                | KNRFCSGVSSNSKSNNSCVYVYIDR                         |
|             | 1            | 1 |            | 1          |                     | DIDTHTYIHIHTNICIHILFFFFFETES                      |
|             | Į            |   |            |            |                     | HALSPRLECNGVISAHCNLHPPG\SS                        |
|             |              |   |            |            |                     | DSPASAARVAG\ITGTCHHAQLIFFF                        |
| 1           | 1            | 1 |            |            |                     | FVFLVETGFHHAAQAGSQTPDLR*S                         |
|             | <b>!</b>     |   |            | ļ          |                     | TPLGFPKC*DYRR/AAIVPGIFLLH*I                       |
| 1           | {            | 1 |            |            |                     | R*\KVPTLLTDMRNASEYDCDFSTN                         |
| }           | j            |   |            |            |                     | KIDKEETFS*NASLNLCLLST*PYEM                        |
|             |              |   |            |            |                     | VTHFKGY*ILPLFFFFFLRQSL/SSVT                       |
| 1           |              |   |            | 1          |                     | QAGVQWHNLGSLQPLPPGFKQFSC                          |
|             |              |   |            |            |                     | LSLPSSWDYRYQLPRLA/NF/FVFLV                        |
| 1           | }            |   |            |            |                     | ETGFHHAAQAGSQTPDLR                                |

## WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1-5497, a mature protein coding portion of SEQ ID NO: 1-5497, an active domain of SEQ ID NO: 1-5497, and complementary sequences thereof.

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- 2. An isolated polynucleotide encoding a polypeptide with biological activity, wherein said polynucleotide hybridizes to the polynucleotide of claim 1 under stringent hybridization conditions.
- 10 3. An isolated polynucleotide encoding a polypeptide with biological activity, wherein said polynucleotide has greater than about 90% sequence identity with the polynucleotide of claim 1.
  - 4. The polynucleotide of claim 1 wherein said polynucleotide is DNA.
- 15 5. An isolated polynucleotide of claim 1 wherein said polynucleotide comprises the complementary sequences.
  - 6. A vector comprising the polynucleotide of claim 1.
- 20 7. An expression vector comprising the polynucleotide of claim 1.
  - 8. A host cell genetically engineered to comprise the polynucleotide of claim 1.
- 9. A host cell genetically engineered to comprise the polynucleotide of claim 1 operatively associated with a regulatory sequence that modulates expression of the polynucleotide in the host cell.
  - 10. An isolated polypeptide, wherein the polypeptide is selected from the group consisting of:
    - (a) a polypeptide encoded by any one of the polynucleotides of claim 1; and
    - (b) a polypeptide encoded by a polynucleotide hybridizing under stringent conditions with any one of SEQ ID NO: 1-5497.
  - 11. A composition comprising the polypeptide of claim 10 and a carrier.
- 35 12. An antibody directed against the polypeptide of claim 10.

13. A method for detecting the polynucleotide of claim 1 in a sample, comprising:

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- a) contacting the sample with a compound that binds to and forms a complex with the polynucleotide of claim 1 for a period sufficient to form the complex; and
- b) detecting the complex, so that if a complex is detected, the polynucleotide of claim 1 is detected.
- 14. A method for detecting the polynucleotide of claim 1 in a sample, comprising:
- a) contacting the sample under stringent hybridization conditions with nucleic acid primers that anneal to the polynucleotide of claim 1 under such conditions;
  - b) amplifying a product comprising at least a portion of the polynucleotide of claim 1; and
- c) detecting said product and thereby the polynucleotide of claim 1 in the sample.
  - 15. The method of claim 14, wherein the polynucleotide is an RNA molecule and the method further comprises reverse transcribing an annealed RNA molecule into a cDNA polynucleotide.
- 20 16. A method for detecting the polypeptide of claim 10 in a sample, comprising:
  - a) contacting the sample with a compound that binds to and forms a complex with the polypeptide under conditions and for a period sufficient to form the complex; and
  - b) detecting formation of the complex, so that if a complex formation is detected, the polypeptide of claim 10 is detected.
  - 17. A method for identifying a compound that binds to the polypeptide of claim 10, comprising:
  - a) contacting the compound with the polypeptide of claim 10 under conditions sufficient to form a polypeptide/compound complex; and
- 30 b) detecting the complex, so that if the polypeptide/compound complex is detected, a compound that binds to the polypeptide of claim 10 is identified.
  - 18. A method for identifying a compound that binds to the polypeptide of claim 10, comprising:

a) contacting the compound with the polypeptide of claim 10, in a cell, under conditions sufficient to form a polypeptide/compound complex, wherein the complex drives expression of a reporter gene sequence in the cell; and

- b) detecting the complex by detecting reporter gene sequence expression, so that if the polypeptide/compound complex is detected, a compound that binds to the polypeptide of claim 10 is identified.
- 19. A method of producing the polypeptide of claim 10, comprising,
- a) culturing a host cell comprising a polynucleotide sequence selected from the group consisting of a polynucleotide sequence of SEQ ID NO: 1-5497, a mature protein coding portion of SEQ ID NO: 1-5497, an active domain of SEQ ID NO: 1-5497, complementary sequences thereof and a polynucleotide sequence hybridizing under stringent conditions to SEQ ID NO: 1-5497, under conditions sufficient to express the polypeptide in said cell; and
  - b) isolating the polypeptide from the cell culture or cells of step (a).
  - 20. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 5498-10994, the mature protein portion thereof, or the active domain thereof.

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- The polypeptide of claim 20 wherein the polypeptide is provided on a polypeptide array.
- 22. A collection of polynucleotides, wherein the collection comprises the sequence information of at least one of SEQ ID NO: 1-5497.
- 25 23. The collection of claim 22, wherein the collection is provided on a nucleic acid array.
  - 24. The collection of claim 23, wherein the array detects full-matches to any one of the polynucleotides in the collection.
- 30 25. The collection of claim 23, wherein the array detects mismatches to any one of the polynucleotides in the collection.
  - 26. The collection of claim 22, wherein the collection is provided in a computer-readable format.

27. A method of treatment comprising administering to a mammalian subject in need thereof a therapeutic amount of a composition comprising a polypeptide of claim 10 or 20 and a pharmaceutically acceptable carrier.

A method of treatment comprising administering to a mammalian subject in need thereof a therapeutic amount of a composition comprising an antibody that specifically binds to a polypeptide of claim 10 or 20 and a pharmaceutically acceptable carrier.